United States Department of the Interior
Bureau of Land Management

Finding of No Significant Impact
Environmental Assessment
DOI-BLM-UT-G021-2011-0024-EA

July 2011

Mathington Substation

Location: *Approximately 2½ Miles North of Wellington, Utah*

Applicant/Address: *Rocky Mountain Power/PacifiCorp*
1407 West North Temple, Suite 110
Salt Lake City, Utah 84116

U.S. Department of the Interior
Bureau of Land Management
Price Field Office
125 South 600 West
Price, Utah 84501
Phone: 435-636-3610
FAX: 435-636-3657

BLM

FINDING OF NO SIGNIFICANT IMPACT

Environmental Assessment

DOI-BLM-UT-G021-2011-0024-EA

Mathington Substation

Based on the analysis of potential environmental impacts contained in the attached environmental assessment, and considering the significance criteria in 40 CFR 1508.27, I have determined that construction, operation, and maintenance of a substation, transmission lines, access road and snow fencing will not have a significant effect on the human environment. An environmental impact statement is therefore not required.

Patricia A. Clabaugh — 8-9-2011

Authorized Officer — Date

United States Department of the Interior
Bureau of Land Management

Decision Record
Environmental Assessment
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DECISION RECORD
Environmental Assessment
DOI-BLM-UT-G021-2011-0024-EA
Mathington Substation

It is my decision to authorize a Federal Land Policy and Management Act (FLPMA) Title V right-of-way (ROW) to Rocky Mountain Power/PacifiCorp for 30 years with the right of renewal. This ROW authorizes the construction, operation, and maintenance of a substation, transmission lines, access road and snow fencing.

The following table shows the right-of-way authorized for each type of facility in the project and the total for all facilities that are proposed.

Facility	Length (ft)	Width (ft)	Area (acres)
Substation	927	790	14.54
Snow fence	603	55	0.76
Access road	1,575	35	1.27
138kV overhead power line, section 1	704	125	2.02
138kV overhead power line, section 2	1,817	125	5.24
46kV overhead power line	1,237	60	1.70
		Total	**25.53**

Location of Proposed Action:

T. 14 S., R.11 E., Salt Lake Meridian, Carbon County, Utah
Section 30: NE¼.

PLAN CONFORMANCE AND CONSISTENCY:
The proposed action has been reviewed and determined to be in conformance with the terms and conditions of the Resource Management Plan (RMP) as required by 43 CFR 1610.5.

This project is consistent with the objectives, goals, and decisions of the PFO Record of Decision and Approved Resource Management Plan. The Resource Management Plan (RMP) provides broad direction for the management of lands administered by the PFO and general discussions of associated environmental effects.

A specific Lands and Realty (LAR) goal of the Resource Management Plan is to "Make public lands available through ROWs or leases for such purposes as transportation routes, utilities, transmission lines, and communication sites, in coordination with other resource goals." The applicable objective is to "Make public lands available to meet the needs for smaller ROWs." Management Decision LAR-23 states (BLM 2008, p.119): "All utility corridors within the PFO are designated for any size utility and transportation uses needed." LAR-28 states (BLM 2008, p. 120) "Additional ROWs will be granted consistent with Resource Management Plan goals and objectives." The requested ROWs are within existing designated utility corridor and far removed from any avoidance or exclusion areas (BLM 2008, Map R-21).

Land Use Plan Name: Price Field Office Resource Management Plan
Date Approved/Amended: October 31, 2008

It has also been determined by review of the RMP, that the Proposed Action would not conflict with other decisions throughout the Price Field Office RMP.

Alternatives Considered: Four action alternatives and the No Action alternative were considered in addition to the Proposed Action, but were eliminated from detailed analysis. The Proponent considered a 138kV loop to the Coal Creek Substation. Looping 138kV out to the Coal Creek Substation would require more transmission line, and the substation is not set up for expansion. The Proponent also considered installing capacitors at the Coal Creek Substation, but this would only address half of the current condition that needs to be upgraded, and thus would not meet the purpose and need for the project.

Two additional alternatives were considered following a public meeting on May 31, 2011 and the BLM's request that these sites be considered. The first of these alternatives was a location currently leased and in use by Carbon County as a gravel pit. The County intends to continue using the site and plans on requesting an extension on their BLM lease when it expires. Other reasons for eliminating this site from consideration include the following:

• Additional land disturbance would be required to connect to existing 138kV and 46kV lines.

The Proposed Action has been located and designed to meet anticipated future power demands in Wellington; this alternative would not be suitable for local distribution in the Wellington area and would necessitate an additional substation closer to Wellington in the future.

• The anticipated 138kV line from Huntington would require additional disturbance to connect to this alternate location.

For these reasons, this site was eliminated from further consideration.

Similarly, the second alternate location was a parcel near the airport that is currently part of the County landfill and part of a proposed golf course after the landfill is retired. Besides the County's plan for future development of this site, County officials do not want the substation located in the flight path of the airport runway and Rocky Mountain Power is opposed to locating any substations near airports as there is a higher probability a small aircraft accident could occur and impact substation operations. While transmission lines can be repaired rather quickly should an accident occur, Rocky Mountain Power would not be able to repair damages and replace damaged substation equipment in a short period of time. Other reasons for eliminating this site from further consideration include the following:

• The reliability of service within the Carbon County area could be adversely affected if this alternate location is selected.

• Additional land disturbance would be required to connect to existing 138kV and 46kV lines.

• As noted for the gravel pit location, this site could not be used for distribution of service to the Wellington area without either excessively long distribution lines or an additional substation in the Wellington area in the future.

• The anticipated future 138 kV line from Huntington would require additional transmission line disturbance to connect to this site.

For these reasons, this second alternate location was eliminated from further consideration.

Under the No Action Alternative the Proposed Action would not be built and the electrical infrastructure in the Price and Wellington area would continue to supply electricity. The Purpose and Need of the project would not be met.

Rationale for Decision: Based on a review of the project described above and field office staff recommendations attached, I have determined that the project is in conformance with the land use plan and is categorically excluded from further environmental analysis. It is my decision to approve the action as proposed, with the following stipulations and the terms and conditions in the grant document:

During construction activities, vehicles delivering equipment, construction materials, and personnel will access the site using the existing Airport Road. No upgrades to Airport Road are planned and some vehicles, such as those towing low-boy trailers, will access the site from North Coal Creek Road.

Applicant Committed Environmental Protection Measures

Reclamation/stabilization will be conducted on all temporarily disturbed areas within 60 days of the end of activities or as soon as conditions allow. The short-term goal of reclamation will be to stabilize disturbed areas as rapidly as possible, thereby protecting adjacent undisturbed areas from erosion. The long-term goal will be to return the land temporarily disturbed to predisturbance conditions through the establishment of an ecologically sustainable vegetation community. Disturbed areas will be seeded as soon as conditions allow (typically spring or fall). The project will utilize the Utah BLM Green River District Reclamation Guidelines (BLM 2011). These guidelines will be applied, as appropriate, as determined by the BLM.

Public Health and Safety Protection Measures

Construction sites will be managed to prevent harm to any person and property. During construction, all employees, project managers, supervisors, inspectors, contractors, and subcontractors will be required to conform to the Proponents' safety procedures. All personnel will be adequately trained to perform their tasks. The contractors will be required to have personal protection equipment before entering the substation site. Fire retardant clothing, steel-toed boots, hard hats, and safety glasses will be required. Heavy equipment will be outfitted with Occupational Safety and Health Administration required safety devices such as backup warnings and seat belts. All accidents and injuries will be reported to the appropriate contractor safety officer.

The general public will not be allowed to enter the substation construction site, which will be secured with an 8-foot chain link fence. Construction will result in increased traffic along North Coal Creek Road and Airport Road during construction, and increased tractor-trailer traffic to and from the ROW. Traffic at the site will be managed by the contractor.

- Construction-related traffic will be restricted to routes approved by BLM and Carbon County.

- Existing state and county roads and an existing access road will be used to access the substation site. Construction, operations, and maintenance equipment will be restricted to the ROW.

- At no time will construction, operations, or maintenance inhibit emergency vehicle passage.

Industrial Wastes and Toxic Substances

Hazardous materials used during construction will include petroleum products typically required for heavy equipment operation (e.g., gasoline, diesel fuel, lubricants, and coolants) which contain several hazardous and extremely hazardous materials identified in the Environmental Protection Agency's (EPA's) consolidated list of chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 355. Project construction and maintenance operations will comply with all relevant federal and state laws regarding hazardous materials.

Vehicles will be maintained and operated to prevent accidental leaks or spills. The Proponent's contractors will adhere to a Spill Prevention Control and Countermeasure Plan to minimize adverse environmental impacts from spills.

The Proponent and its contractors will conform to provisions of the Toxic Substances Control Act of 1976, as amended with regard to any toxic substances that are used, generated, or stored on the ROW or on facilities authorized under ROW grants. The Proponent and its contractors will not generate any hazardous waste during the implementation of the project or operation of the substation.

Fire Plan

Standard fire prevention stipulations will apply, in addition to at least 30 feet of vegetative clearance around the facility or fence to provide hazard mitigation. This will be maintained annually.

During construction, the Proponent will notify the BLM of any fires and will comply with all rules and regulations administered by the BLM concerning the use, prevention, and suppression of fires on federal lands. In the event of a fire, the Proponent or its contractors will initiate fire suppression actions in the work area. Suppression will continue until the fire is out or until the crews are relieved by an authorized representative of the BLM.

Litter/Cleanup

Construction vehicles will be equipped with litter disposal containers. Contractors will be informed that any littering within the Project Area may result in their immediate dismissal.

Construction sites, material storage areas, and access roads will be kept in an orderly condition throughout the construction period. Refuse and trash, including stakes and flagging, will be removed from the sites and disposed of in authorized disposal sites or landfills. No construction equipment oil or fuel will be drained on the ground. Oils or chemicals will be hauled to an approved site for disposal.

Environmental Protection Measures

Air
Water trucks will be used as needed to reduce the dust to acceptable levels. Any water used for dust suppression will be brought in from off-site using a water truck. Equipment will be properly maintained to minimize emissions.

Noise
All equipment will be properly muffled and construction will occur only during daylight hours. Due to the rural location and small size of the project, noise is not expected to be an issue during either construction or operation.

Paleontological Resources
If Paleontological Resources are discovered during construction, work will cease within 100 feet of the discovery, and the find will be evaluated by a BLM approved paleontologist. Construction within 100 feet of the fossil site will not resume until the site was avoided or otherwise mitigated to BLM satisfaction.

Soils
Erosion control and reclamation measures will be applied in a timely manner and in accordance with applicable permits and plans. Disturbance will be limited to that which is necessary for safe and efficient system installation. All temporarily disturbed areas will be restored to original contour to the extent practicable and reclaimed as described. Appropriate best management practices will be used to minimize erosion if needed.

Should construction equipment create surface ruts in excess of six inches deep due to saturated conditions, construction activities will be halted and delayed until soil conditions improve. Routine maintenance activities will be scheduled to the extent practicable to avoid such conditions.

Oil and fuel will be properly contained in storage areas. Equipment will be regularly maintained. These measures will minimize potential soil contamination due to spills during construction, operation, and maintenance. Contaminated soil from accidental spills will be cleaned up immediately as required by regulation.

Water Resources
Suitable drainage and erosion protection/stabilization measures will be implemented as needed throughout the Project Area. An unnamed ephemeral or intermittent reach originating in the southeastern portion of the lease area has been incorporated into the site drainage system that will collect precipitation and run-on water from the substation site into an underdrain and

ditches, where it will pass through a settling pond before being discharged back to the natural drainage. Construction crews will avoid this reach to the extent possible.

Vegetation, including Noxious and Non-Native Invasive Weeds
Disturbance will be limited to that which is necessary for safe and efficient equipment installation and operation. All temporarily disturbed areas will be restored to the approximate original contour and reclaimed using a BLM approved certified noxious weed-free seed mix. Following construction, the Green River District Reclamation Guidelines (BLM 2011) will be used in concert with the UPDES general permit conditions to guide revegetation and stabilization of the site.

Noxious and Non-Native Invasive Weeds

Prior to entering BLM lands and the Project Area for the first time, all construction equipment will be cleaned of soils, seeds, vegetative matter, or other debris that could contain or hold noxious weed seeds. The cleaning of equipment will also be done any time thereafter if the equipment leaves the Project Area, is used on another Project, and reenters the Project Area. Construction equipment will be either steamcleaned off-site at a commercial wash facility or at the equipment owner's private facility. Cement trucks will only be used and needed when the Project Area is already cleared and disturbed, thus access will be along existing roads and through areas devoid of vegetation. Adherence to existing noxious weed Management Decisions (i.e. Veg-8 through Veg-11) will occur (BLM 2008). All fill brought in for construction will be certified weed-free seed and meet BLM standards.

The Proponent will be responsible to treat the area for invasive or noxious weeds that might become established in areas disturbed by the project. If needed, a Pesticide Use Proposal (PUP) will be submitted to the PFO for approval prior to any chemical treatment. It is the BLM's responsibility to monitor pesticide applications on public land and to ensure that an approved PUP is followed. It is the responsibility of the certified pesticide applicator to be sure the product label is followed. A Pesticide Application Record is required to be completed by the lead applicator within 24 hours after completion of the pesticide treatment. A daily record must be kept for the length of the treatment for each site. To comply with this requirement, the BLM's PFO will be notified when spraying/treating on public land will occur, and all completed Daily Pesticide Application Records will be sent to the PFO within 30 days after treatment. If treatment is needed, pesticides will be applied by a certified licensed applicator in strict accordance with the product label and the approved PUP.

Wildlife, including Threatened and Endangered Species
Disturbance will be minimized to that which is necessary for safe and efficient equipment installation and operation. All areas temporarily disturbed will be restored to original contour and reclaimed.

No firearms, air guns, or archery equipment will be allowed on the project sites. No pets will be permitted on project sites. To prevent entrapment of wildlife during construction, any open pits (pole holes) will be monitored throughout the construction day. Excavated pits more than 2 feet deep will be covered at the close of each day. Alternatively, fencing may be erected around open

pits or trenches. At the beginning of the construction day and before pits are filled, they will be inspected for trapped animals. If any animals are found, they will be moved out of harm's way. No rodenticides will be used on project sites. Encounters with a protected species (e.g., raptors, migratory birds, or listed or special status species) will be reported to the BLM and/or the appropriate oversight agency (e.g., USFWS). Any contractor or employee who inadvertently kills or injures a protected species will immediately report the incident to the BLM and/or the appropriate oversight agencies. If a federally listed species is located within the Project Area, work will be immediately halted to allow the appropriate federal agency to respond. Consultation with the USFWS will be initiated immediately upon discovery of a federally listed species and additional mitigation measures may be applied where necessary.

Raptors and Migratory Birds

Raptors, including Burrowing Owls

Any raptor nests within the Project Area will be identified if land clearing construction activities are scheduled during the breeding season (March 1 through August 31). All active raptor nests will be avoided. Known raptor nest sites will be checked 2 to 5 days prior to construction activities in a given area. If an active raptor nest site is discovered, an appropriate construction avoidance buffer area and timeframe for avoidance (BLM 2006), to be determined for the species and in conjunction with the BLM, will be applied; contingent upon BLM's approval, the Proponent may utilize biological monitors to allow construction to continue during the standard avoidance period.

Structure designs for the overhead power lines are approved for use in raptor areas. All such structures will be monitored by the Proponent on a regular basis to check for nests. Should nesting occur in a manner that represents an electrocution threat, appropriate authorities will be contacted to ensure safe nest removal. If land clearing construction activities were to commence during the breeding season for burrowing owls (mid-March to August 31), a survey to identify active nests will be conducted by a qualified biologist. If evidence of breeding behavior or if an active nest was discovered, construction activities will not be allowed until consultation with the BLM biologist occurred and a plan developed for proper avoidance.

If authorization for the project is provided prior to the breeding season of burrowing owls (February – mid-March) and land clearing construction activities were to commence; all burrows, holes, crevices, or other cavities potentially used by burrowing owls on the construction site will be collapsed after a qualified project biologist thoroughly checks them for inhabitants. This will discourage owls from breeding on the construction site. If land clearing construction activities are scheduled to occur between September and January, no pre-clearance surveys or collapsing of burrows will be required.

Migratory Birds

If land-clearing construction activities are scheduled during the breeding season (generally defined as March 1 through August 31), the areas impacted by construction activities will be surveyed for active nests prior to equipment mobilization. If active migratory bird nests (i.e.

contains eggs or young) are encountered during the surveys, land disturbing construction activities will be avoided while the birds are allowed to fledge. An appropriate construction avoidance buffer area, to be determined for the species and in conjunction with the BLM, will apply to all active nests for migratory bird species.

Cultural Resources
If, during construction, any previously undiscovered cultural resources are encountered, work will immediately cease in the area of the find and the BLM will be contacted.

Protest/Appeal Language: This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and the enclosed Form 1842-001. If an appeal is taken, your notice of appeal must be filed in the office of the Authorized Officer at 125 South 600 West, Price, Utah 84501, within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition (request) pursuant to regulation 43 CFR 2801.10 or 2881.10 for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

(1) The relative harm to the parties if the stay is granted or denied,
(2) The likelihood of the appellant's success on the merits,
(3) The likelihood of immediate and irreparable harm if the stay is not granted, and
(4) Whether the public interest favors granting the stay.

Patricia A. Clabaugh
Authorized Officer

8-9-2011
Date

United States Department of the Interior
Bureau of Land Management

Environmental Assessment
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July 2011

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Appendix B – Drawings

Mathington Substation
DOI-BLM-UT-G021-2011-0024-EA

1.0 PURPOSE & NEED

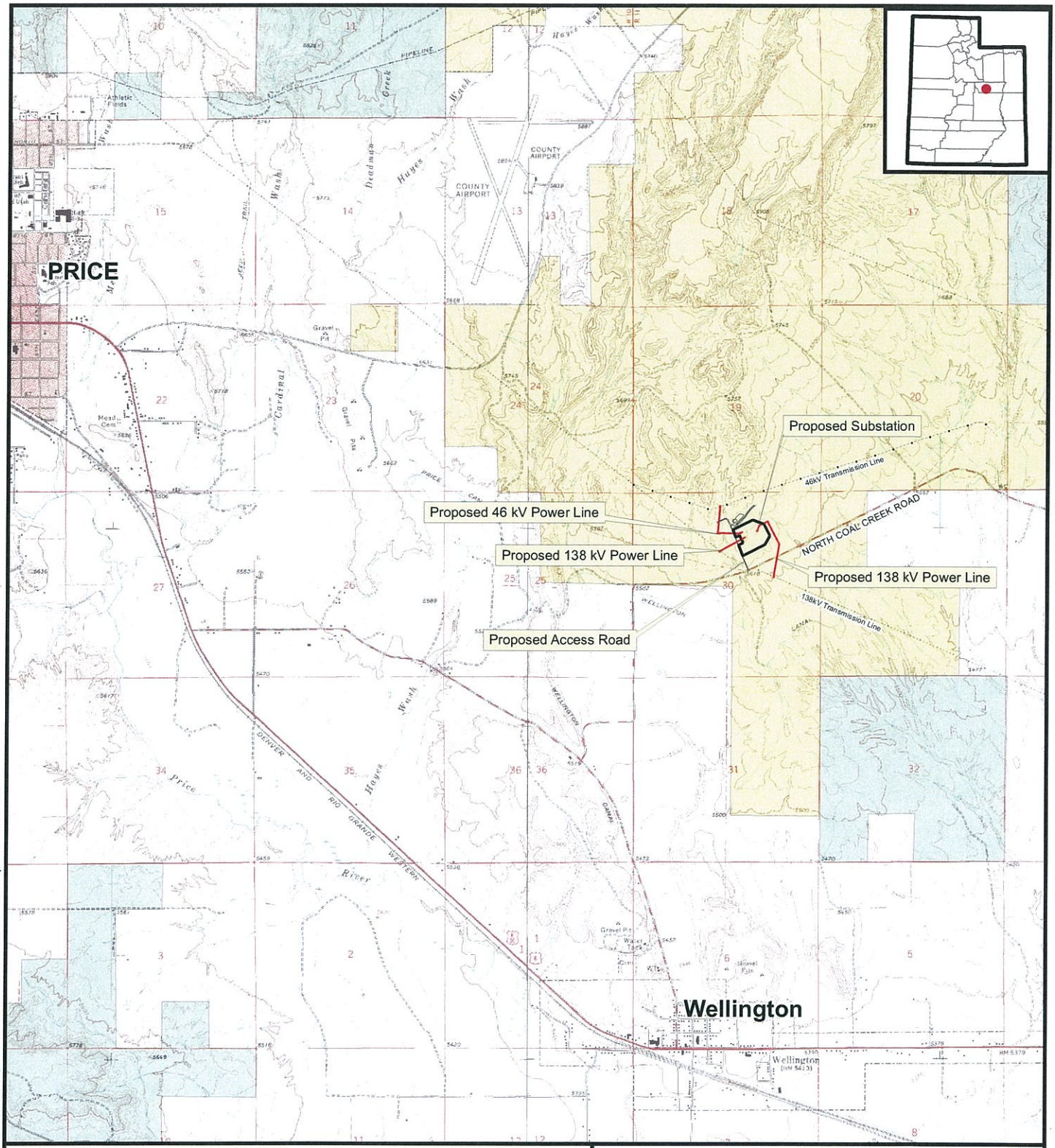
1.1 Introduction

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of the Mathington Substation project as proposed by Rocky Mountain Power/PacifiCorp (Proponent). The Proponent submitted Right-of-Way (ROW) applications to the Bureau of Land Management (BLM), Price Field Office (PFO) to construct, operate, and maintain a new substation, associated transmission lines, access roads, and a snow fence on BLM managed public lands in Carbon County, Utah (**Figure 1**). The project would upgrade existing power service to the customers located in and around the communities of Price and Wellington, Utah. This upgrade would support current and future load growth and maintain distribution transfer capabilities.

An EA is a site-specific analysis of potential impacts that could result with the implementation of a Proposed Action or alternatives to the Proposed Action. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI). If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the selected alternative, whether the Proposed Action or another alternative. A DR, including a FONSI statement, documents the reasons why implementation of the selected alternative would not result in "significant" environmental impacts (effects) beyond those already addressed in the PFO Resource Management Plan (BLM 2008).

1.2 Background

New electrical transmission and distribution projects are needed to meet the current and projected demand in the Proponent's service area, to resolve energy constraint concerns, and to move resources from remote locations to high-growth areas. The existing Coal Creek Substation, which is 2.3 miles to the east-north-east (NW¼ Section 21, T14S, R11E, SLB&M) does not have the capacity to meet current and future area demand, and was not designed to be expanded in the ways necessary to meet that demand. Thus, the existing Coal Creek substation would remain operational as is, but would not be expanded.



BASE MAP: USGS 7.5 MINUTE QUADRANGLE

Legend

- Property Line
- Proposed Power Lines
- Existing Dirt Road

Land Ownership

- Bureau of Land Management (BLM)
- State
- Private

N

4,000 2,000 0 4,000 Feet

PACIFICORP
MATHINGTON SUBSTATION
NE 1/4 Section 30, T14S, R11E

FIGURE 1
PROJECT LOCATION AND LAND OWNERSHIP

JBR

DRAWN BY	DATE DRAWN
CP	03/16/11

SCALE 1:48,000

drawings\Pacificorp\Mathington Substation\Figure 1 Project Location and Land Ownership 031611.mxd

The new substation and related facilities are proposed to increase the capacity and system reliability in Carbon County and surrounding areas. Construction of the project allows the installation of infrastructure to support area load growth and also optimizes the use of existing facilities. Power line voltage is reduced as it moves down the line; this substation and system expansion would provide a greater capacity to "boost" the power as it continues to the end users. Existing 138kV and 46kV transmission lines currently cross BLM lands and the proposed Mathington Substation site is in close proximity to these lines.

1.3 Purpose(s) and Need of the Proposed Action

The BLM's need for this project is to respond to and consider approval of requests from the Proponent for ROWs for the proposed substation and associated infrastructure. The Federal Land Policy and Management Act of 1976 (FLPMA; 43 USC 1761-1770) directs the BLM to grant and manage ROWs on public land managed by the BLM. This type of ROW grant is authorized by Title V of FLPMA (43 U.S.C. 1761-1771). As defined in 43 CFR 2800, a ROW grant is required to use specific areas of public land for certain projects, including electrical distribution systems, which are in the public interest. ROWs are granted to any qualified individual, business, or government entity, and it is the BLM's purpose to direct use of ROWs in a manner that protects natural resources; prevents unnecessary or undue degradation to public lands; and promotes the use of ROWs in common, in coordination with state and local governments and interested individuals. The BLM will decide whether or not to grant the ROW, and if so, under what terms and conditions.

It is the purpose of the BLM to authorize all ROW applications at the discretion of the authorized officer in the most efficient and economical manner possible, and in a way that minimizes environmental impacts to the extent possible while still responding to the proponent's underlying objectives.

1.4 Conformance with BLM Land Use Plan(s)

This project would be consistent with the objectives, goals, and decisions of the PFO Record of Decision and Approved Resource Management Plan as they relate to the ROW program. The Resource Management Plan (BLM 2008) provides broad direction for the management of lands administered by the PFO and general discussions of associated environmental effects.

A specific Lands and Realty (LAR) goal of the Resource Management Plan is to "Make public lands available through ROWs or leases for such purposes as transportation routes, utilities, transmission lines, and communication sites, in coordination with other resource goals." The applicable objective is to "Make public lands available to meet the needs for smaller ROWs." Management Decision LAR-23 states (BLM 2008, p.119): "All utility corridors within the PFO are designated for any size utility and transportation uses needed." LAR-28 states (BLM 2008, p. 120) "Additional ROWs will be granted consistent with Resource Management Plan goals and objectives." The requested ROWs are within existing designated utility corridor and far removed from any avoidance or exclusion areas (BLM 2008, Map R-21).

1.5 Relationship to Statutes, Regulations, or other Plans

In addition to FLPMA, mentioned above, the following statutes, regulations, agencies, and other plans may pertain to the Proposed Action:

- Utah Division of Wildlife Resources for potential wildlife impacts,
- Air Quality Rule R307-205-5 for potential fugitive dust associated with disturbances greater than ¼ acre, regulated by the Utah Division of Air Quality, and
- Conformance with the Carbon County Master Plan (Carbon County 1997, Revised 2004 and 2005). The Proposed Action is in conformance with this plan.

1.6 Identification of Issues

The BLM Interdisciplinary Team (ID Team) completed a checklist (**Appendix A**), which identifies the issues considered and concerns expressed by resource specialists. It is the foundation for the impact analysis in this EA. This section briefly describes the issues and concerns that the ID Team identified as being potentially impacted by the proposed action.

1.6.1 BLM Sensitive Animal Species

White-tailed prairie dogs (*Cynomys leucurus*) are known to be in the area. There is potential for burrowing owls (*Athene cunicularia*).

1.6.2 Invasive Species and Noxious Weeds

Any soil disturbing activity has the potential to increase or spread invasive species and noxious weeds.

1.6.3 Soils

This project could cause soil mixing, soil compaction, and modification of the soil resource.

1.6.4 Vegetation, excluding United States Fish and Wildlife Service (USFWS) Designated Species and BLM Sensitive Species

Implementation of the Proposed Action would remove and affect the existing vegetation.

1.7 Summary

This chapter has presented the purpose and need of the proposed project, as well as the relevant issues, i.e., those elements of the human environment that could be affected by the implementation of the proposed project. In order to meet the purpose and need of the proposed project in a way that resolves the issues, the BLM has considered a range of action alternatives. These alternatives, as well as a no action alternative, are presented in Chapter 2. Current baseline conditions for potentially affected resources and issues identified in **Section 1.6** are presented in Chapter 3. The potential environmental impacts or consequences resulting from the implementation of each alternative are then analyzed in Chapter 4 for each of the identified issues. Additional information on the scoping process is in Chapter 5, Consultation and Coordination.

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

2.1 Introduction

The project would consist of:

- A new 138kV/46kV substation (named the Mathington Substation),
- Transmission lines to connect the substation to the existing 138kV Helper-Mounds transmission line and the existing 46kV Price-Coal Creek transmission line,
- Access roads to the substation, and
- Snow fencing.

The Project Area would consist of the requested ROWs that would encompass the project components listed above. **Figure 2** shows the project elements. The Project Area is within a BLM-designated utility corridor (BLM 2008, Map R-21).

2.2 Alternative A – Proposed Action

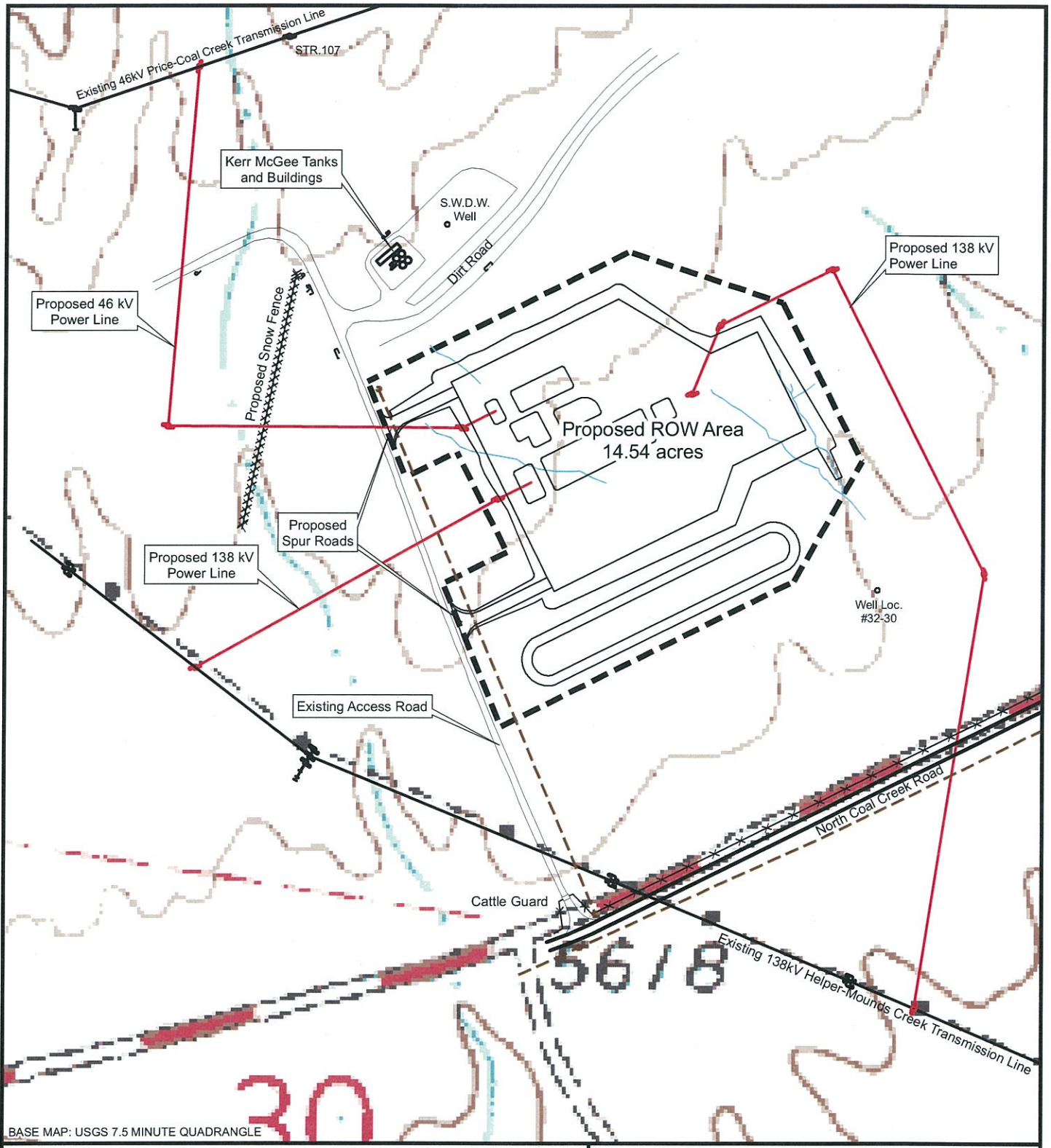
Table 1 shows the right-of-way requested for each type of facility in the project and the total for all facilities that are proposed.

Table 1 Requested ROW over BLM lands for all facilities

Facility	Length (ft)	Width (ft)	Area (acres)
Substation[1]	927	790	14.54
Snow fence	603	55	0.76
Access road	1,575	35	1.27
138kV overhead power line, section 1	704	125	2.02
138kV overhead power line, section 2	1,817	125	5.24
46kV overhead power line	1,237	60	1.70
		Total	**25.53**

[1] Requested ROW is not a rectangle; length and width presented in **Table 1** represent the maximum length and width, and area represents the actual ROW. See **Figure 1** and drawings.

The Proponent has submitted a SF299 ROW *Application for Transportation and Utility Systems and Facilities on Federal Lands* to the BLM PFO. The requested ROW time frame is 30 years with a right to renew so long as the substation is in operation. The Proponent would construct and operate the project in conformity with the approved Plans of Development that would be included as part of the ROW authorization. The design, construction, operation, and maintenance of the project would meet or exceed the requirements of the National Electrical Safety Code and U.S. Department of Labor Occupational Safety and Health Standards, as well as the Proponent's requirements for the safety and protection of landowners and their property.



BASE MAP: USGS 7.5 MINUTE QUADRANGLE

drawings\Pacificorp\Mathington Substation\Figure 2 Site Plan and Land Ownership 032111.mxd

Legend

- Proposed Substation ROW Area
- Proposed Power Lines
- Proposed Snow Fence
- Existing Fence
- Existing Flow
- Existing Overhead Transmission Line
- Existing Underground Transmission
- Existing Asphalt Road
- Existing Dirt Road
- Existing Underground Telephone Line
- Building

N

0 150 300 Feet

PACIFICORP
MATHINGTON SUBSTATION
NE 1/4 Section 30, T14S, R11E

FIGURE 2
SITE PLAN

JBR

DRAWN BY	DATE DRAWN
CP	03/21/11

SCALE 1:3,600

2.2.1 Substation

The proposed project area for the substation is an irregular polygon that would fit within a 927 feet by 790 feet rectangle (see **Figure 2** and **Appendix B**). The ROW would consist of 14.54 acres, all on BLM public lands. The system expansion would necessitate acquiring a ROW to accommodate installation and operation of the substation. The Mathington Substation project would be authorized with a 30-year renewable ROW on BLM lands (see Overall Site Layout drawing in **Appendix B**). A temporary use ROW would not be required for construction or operations (**Figure 2**).

Geotechnical investigation of the proposed site would be needed before construction commences. This would consist of a seismograph and 6 or more geophones placed in an array along the ground surface. Background or ambient vibrations measured by the geophones would be used to assess the underlying soil and bedrock characteristics. The equipment would be placed by hand, and the geophone probes would penetrate the surface less than 6 inches. Each geophone array would be laid out up to 100 feet in length. Typically two to four arrays are placed across the site to gather sufficient data.

Exploratory test pits to expose the underlying soil types to allow for hand-sampling of the soil materials would also be completed before construction. Test pits would be excavated with rubber-tire mounted equipment (e.g., backhoe) and extend to depths of 4 to 8 feet below grade. Laterally, each pit would be typically 10 to 15 feet long and 8 to 12 feet wide. Following logging and sampling of the pit, the removed soils would be placed back in the pit in layers. Each layer would be tamped with the excavator bucket to minimize future settlement.

The substation would be of typical utility substation construction. The site would be enclosed by a standard 8 foot high chain-linked fence. The site improvement area includes a graded layer of approximately 8 inch deep compacted base with additional 2 to 4 inches of loose rock for a top layer. Clean fill used for base would be brought in from an off-site private source. It is estimated that approximately 47,000 cubic yards of structural fill, road finish rock, aggregate base, and yard finish rock would be needed for the project. Internal site structures include various concrete slabs to support switches, transformers, other equipment, and various support columns, insulators, and electrical buswork (see **Appendix B**). The site would include an electrical subsurface grid of copper wire for electrical grounding. The tallest substation equipment would not exceed approximately 80 feet in height.

A microwave tower would be constructed for communication and control of the site. The tower would be approximately 70 feet in height. Soil cleared from the site during grading would be used to create a visual berm that would be located along the south edge of the project to reduce the visual impact of the project from North Coal Creek Road.

During construction activities, vehicles delivering equipment, construction materials, and personnel would access the site using the existing Airport Road. No upgrades to Airport Road are planned and some vehicles, such as those towing low-boy trailers, would have to access the site from North Coal Creek Road.

2.2.2 Transmission Lines

ROWs are requested for the three power lines that are needed to connect the Mathington Substation to the 2 existing transmission lines (see **Figure 2**). One line would connect to the 46kV Helper-Coal Creek transmission line, which runs to the north of the proposed substation. That line would be 1,237 feet in length and require a 60 foot wide ROW (30 feet each side of the centerline); this ROW would consist of 1.70 acres, all on BLM public land. The line would use 70-80 feet tall vertical configuration poles (schematics of the poles are included in **Appendix B**), as follows:

- Four TG252 single-pole structures (two where the new line bends and two at the taps).
- One TG285 single-pole structure at the substation entrance.
- Four TG271 single-pole structures for the tangents running south from the tap, and tangents directly west of the substation.

A second line would feed into the proposed substation from the existing 138kV Helper-Mounds transmission line, which runs southwest of the proposed substation. This line would be 1,817 feet in length and require a 125 foot wide ROW (62.5 feet each side of the centerline); this ROW would consist of 5.24 acres, all on BLM public land.

A third line would feed back from the proposed substation to the existing 138kV Helper-Mounds transmission line. This line would be 704 feet in length and require a 125 foot-wide ROW (62.5 feet each side of the centerline); this ROW would consist of 2.02 acres, all on BLM public land. The new 138kV loop in/out would use the following 70-80 feet tall, horizontal configuration structure types:

- 3 TG452 triple-pole structures at the taps on the east and west sides of the substation in addition to one along the east line route.
- 1 TG285 single-pole structure, closest to the substation on the west side.
- 2 TG403 double-pole structures, one just before each TG452 tie in.
- 5 TG252 single-pole structures, east side.

Schematics are provided in **Appendix B**. All pole designs are approved for use in raptor areas. All engineering, safety, and regulatory requirements would be met.

The poles would be buried to a depth of 6.5 to 7 feet. The pole spans would vary from approximately 100 to 350 feet. The ROWs would be used for all overland travel, pole placement, and pull stations.

TG285 pole structures would be placed on concrete foundations, similar to the foundations that would be built inside the substation for electrical equipment. For all other pole structures, holes would be dug using a backhoe or auger. Typical pole installation would involve temporary surface disturbance of approximately 50 feet in diameter around each structure location (i.e., 25 foot radius = 0.045 acres). No blasting is anticipated; however, if required, such activities would be conducted in accordance with applicable regulations and requirements. Poles would be delivered to their installation site using a log truck type trailer and/or line truck via overland travel since no new access roads are proposed for new transmission line construction. Insulators and

conductor installation pulleys would be attached to poles prior to placing them in the hole. Poles would be placed in their holes using a rubber tired boom truck, or similar and excess soils spread around the base of the structures. When the structures are in place, the conductor would be installed by first running a sock line through the pulleys and along the alignment, from structure to structure. The sock line would be pulled from each structure by a vehicle along approved ROWs and/or roads or by hand/walking. The conductor would then be attached to the pull line and pulled through the pulleys using a reel truck. Two pull stations would be required for each of the three new lines (six total) and would be situated within the ROW.

2.2.3 Access Roads

The Proponent would need an additional ROW for an existing graveled access road and two spurs off that road into the substation area. The existing access road is currently maintained by Kerr McGee Company, which has oil and gas exploration and production facilities in the area. Kerr McGee has a ROW from the BLM PFO for the access road. The existing access road is on BLM land and is currently in use by the public and by developers of oil and gas facilities in the immediate vicinity.

The total requested ROW for the access road would be 1,575 feet in length and 35 feet in width (17.5 feet either side of the centerline) for a total of 1.27 acres (see **Figure 2**) located in the W½ of the NE¼ of Section 30, T14S R11E SLB&M. As much as 1,200 feet of the existing road would be used as is or improved and maintained as needed. Although the ROW would be 35 feet wide, the road surface would be 20 to 24 feet in width.

Approximately 1,200 feet north of North Coal Creek Road, off the existing road a new spur would be built to the northwest corner of the substation facility; this spur road would be approximately 155 feet in length. A second spur road would be constructed less than 600 feet south of the north spur road between the existing road and the southwest corner of the substation facility; this road would be approximately 200 feet in length. The two access spur roads would be bladed and clean-fill would be brought in from an off-site private source to be used for the road base. This access road would be used for delivering large substation equipment that cannot be delivered over the existing access from Airport Road. Future operations and maintenance activities would also use the North Coal Creek access road.

Temporary access for construction (except as described above) would be the existing Airport Road and would not require a ROW, as no improvements or upgrades are needed.

2.2.4 Snow Fences

The proposed ROW for the snow fence would be as follows:

- The fence would be 603 feet long by 5 feet wide. The ROW would add 25 feet on each side for access, giving a total ROW of 33,165 square feet or 0.76 acre.
- The northern end of the fence would be within the access road ROW.

The snow fence would be built to the west of the substation to prevent snow drifts from accumulating in the substation area. Drifts would hinder the Proponent's ability to

respond to outages or other emergencies. Engineering drawings of the snow fencing are on engineering sheet 4 in **Appendix B**. The fencing would be anchored into the ground with five foot lengths of number 6 rebar. The overall width of the fencing would be five feet. Location of the proposed fence is shown on **Figure 2**.

2.2.5 Temporary Wash-Out

During construction, a temporary wash-out area would be located on site within the requested ROW for the proposed substation to wash residual out of trucks delivering concrete to the site. The wash-out would be 10 feet by 10 feet by 1 foot in depth and lined with an approved leak-proof liner to prevent contaminated washout from infiltrating into the ground (see engineering drawing sheet 5 in **Appendix B**). Rinsate would be kept on site for disposal at a licensed facility after construction has been completed.

2.3 Applicant Committed Environmental Protection Measures

The project would not conflict with existing or foreseeable resource values, environmental concerns, or public needs. Environmental protection measures (EPMs) would be implemented, as appropriate, throughout construction, operations, and maintenance. In addition to EPMs, this section describes public health and safety protection measures.

In compliance with BLM policy, reclamation/stabilization would be conducted on all temporarily disturbed areas within 60 days of the end of activities or as soon as conditions allow. The short-term goal of reclamation would be to stabilize disturbed areas as rapidly as possible, thereby protecting adjacent undisturbed areas from erosion. The long-term goal would be to return the land temporarily disturbed to pre-disturbance conditions through the establishment of an ecologically sustainable vegetation community. Disturbed areas would be seeded as soon as conditions allow (typically spring or fall). The project would utilize the Utah BLM Green River District Reclamation Guidelines (BLM 2011). These guidelines would be applied, as appropriate, as determined by the BLM.

2.3.1 Public Health and Safety Protection Measures

Construction sites would be managed to prevent harm to any person and property. During construction, all employees, project managers, supervisors, inspectors, contractors, and subcontractors would be required to conform to the Proponents' safety procedures. All personnel would be adequately trained to perform their tasks. The contractors would be required to have personal protection equipment before entering the substation site. Fire retardant clothing, steel-toed boots, hard hats, and safety glasses would be required. Heavy equipment would be outfitted with Occupational Safety and Health Administration required safety devices such as backup warnings and seat belts. All accidents and injuries would be reported to the appropriate contractor safety officer.

The general public would not be allowed to enter the substation construction site, which would be secured with an 8-foot chain link fence. Construction would result in increased traffic along North Coal Creek Road and Airport Road during construction, and increased tractor-trailer traffic to and from the ROW. Traffic at the site would be managed by the contractor. Construction, operation, and maintenance are not expected

to cause safety hazards or to notably inconvenience motorists or other adjacent users because the Proponent would implement the following measures to mitigate impacts to traffic.

- Construction-related traffic would be restricted to routes approved by BLM and Carbon County.
- Existing state and county roads and an existing access road would be used to access the substation site. Construction, operations, and maintenance equipment would be restricted to the ROW.
- At no time would construction, operations, or maintenance inhibit emergency vehicle passage.

2.3.1.1 Industrial Wastes and Toxic Substances

Hazardous materials used during construction would include petroleum products typically required for heavy equipment operation (e.g., gasoline, diesel fuel, lubricants, and coolants) which contain several hazardous and extremely hazardous materials identified in the Environmental Protection Agency's (EPA's) consolidated list of chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 355. Project construction and maintenance operations would comply with all relevant federal and state laws regarding hazardous materials.

Vehicles would be maintained and operated to prevent accidental leaks or spills. The Proponent's contractors would adhere to a Spill Prevention Control and Countermeasure Plan to minimize adverse environmental impacts from spills. Thus, accidental leaks would not result in violations of any federal or state hazardous material or waste regulations.

The Proponent and its contractors would conform to provisions of the Toxic Substances Control Act of 1976, as amended with regard to any toxic substances that are used, generated, or stored on the ROW or on facilities authorized under ROW grants. The Proponent and its contractors would not generate any hazardous waste during the implementation of the project or operation of the substation.

2.3.1.2 Fire Plan

Standard fire prevention stipulations would apply, in addition to at least 30 feet of vegetative clearance around the facility or fence to provide hazard mitigation. This would be maintained annually.

During construction, the Proponent would notify the BLM of any fires and would comply with all rules and regulations administered by the BLM concerning the use, prevention, and suppression of fires on federal lands. In the event of a fire, the Proponent or its contractors would initiate fire suppression actions in the work area. Suppression would continue until the fire is out or until the crews are relieved by an authorized representative of the BLM.

2.3.1.3 Litter/Cleanup

Construction vehicles would be equipped with litter disposal containers. Contractors would be informed that any littering within the Project Area may result in their immediate dismissal.

Construction sites, material storage areas, and access roads would be kept in an orderly condition throughout the construction period. Refuse and trash, including stakes and flagging, would be removed from the sites and disposed of in authorized disposal sites or landfills. No construction equipment oil or fuel would be drained on the ground. Oils or chemicals would be hauled to an approved site for disposal.

2.3.2 Environmental Protection Measures

2.3.2.1 Air

During the 10 to 12 month construction period some fugitive dust may be generated. The Proponent would use water trucks as needed to reduce the dust to acceptable levels. Any water used for dust suppression would be brought in from off-site using a water truck. Equipment would be properly maintained to minimize emissions.

No fugitive dust or other air quality issues are expected once the substation is in operation.

2.3.2.2 Noise

All equipment would be properly muffled and construction would occur only during daylight hours. Due to the rural location and small size of the project, noise is not expected to be an issue during either construction or operation.

2.3.2.3 Paleontological Resources

There are no known paleontological resources near the Project Area. If important fossils are discovered during construction, work would cease within 100 feet of the discovery, and the find would be evaluated by a BLM approved paleontologist. Construction within 100 feet of the fossil site would not resume until the site was avoided or otherwise mitigated to BLM satisfaction. Vertebrate fossils, or plant or invertebrates fossils that could contribute to scientific knowledge of ancient and modern ecosystems, are considered important.

2.3.2.4 Soils

Erosion control and reclamation measures would be applied in a timely manner and in accordance with applicable permits and plans. Disturbance would be limited to that which is necessary for safe and efficient system installation. All temporarily disturbed areas would be restored to original contour to the extent practicable and reclaimed as described. Appropriate best management practices would be used to minimize erosion if needed. No erosion hazards are anticipated.

Should construction equipment create surface ruts in excess of six inches deep due to saturated conditions, construction activities would be halted and delayed until soil conditions improve. Routine maintenance activities would be scheduled to the extent practicable to avoid such conditions.

Oil and fuel would be properly contained in storage areas. Equipment would be regularly maintained. These measures would minimize potential soil contamination due to spills during construction, operation, and maintenance. Contaminated soil from accidental spills would be cleaned up immediately as required by regulation.

2.3.2.5 Water Resources

Suitable drainage and erosion protection/stabilization measures would be implemented as needed throughout the Project Area. An unnamed ephemeral or intermittent reach originating in the southeastern portion of the lease area has been incorporated into the site drainage system that would collect precipitation and run-on water from the substation site into an underdrain and ditches, where it would pass through a settling pond before being discharged back to the natural drainage. Construction crews would avoid this reach to the extent possible.

2.3.2.6 Vegetation, including Noxious and Non-Native Invasive Weeds

Disturbance would be limited to that which is necessary for safe and efficient equipment installation and operation. All temporarily disturbed areas would be restored to the approximate original contour and reclaimed using a BLM approved certified noxious weed-free seed mix. Following construction, the Green River District Reclamation Guidelines (BLM 2011) would be used in concert with the UPDES general permit conditions to guide revegetation and stabilization of the site.

Noxious and Non-Native Invasive Weeds

Prior to entering BLM lands and the Project Area for the first time, all construction equipment would be cleaned of soils, seeds, vegetative matter, or other debris that could contain or hold noxious weed seeds. The cleaning of equipment would also be done any time thereafter if the equipment leaves the Project Area, is used on another Project, and reenters the Project Area. Construction equipment would be either steam-cleaned off-site at a commercial wash facility or at the equipment owner's private facility. Cement trucks would only be used and needed when the Project Area is already cleared and disturbed, thus access would be along existing roads and through areas devoid of vegetation. Adherence to existing noxious weed Management Decisions (i.e. Veg-8 through Veg-11) would occur (BLM 2008). All fill brought in for construction would be certified weed-free seed and meet BLM standards.

The Proponent would be responsible to treat the area for invasive or noxious weeds that might become established in areas disturbed by the project. If needed, a Pesticide Use Proposal (PUP) would be submitted to the PFO for approval prior to any chemical treatment. It is the BLM's responsibility to monitor pesticide applications on public land and to ensure that an approved PUP is followed. It is the responsibility of the certified pesticide applicator to be sure the product label is followed. A Pesticide Application Record is required to be completed by the lead applicator within 24 hours after completion of the pesticide treatment. A daily record must be kept for the length of the treatment for each site. To comply with this requirement, the BLM's PFO would be notified when spraying/treating on public land would occur, and all completed Daily Pesticide Application Records would be sent to the PFO within 30 days after treatment.

If treatment is needed, pesticides would be applied by a certified licensed applicator in strict accordance with the product label and the approved PUP.

2.3.2.7 Wildlife, including Threatened and Endangered Species

Disturbance would be minimized to that which is necessary for safe and efficient equipment installation and operation. All areas temporarily disturbed would be restored to original contour and reclaimed.

No firearms, air guns, or archery equipment would be allowed on the project sites. No pets would be permitted on project sites. To prevent entrapment of wildlife during construction, any open pits (pole holes) would be monitored throughout the construction day. Excavated pits more than 2 feet deep would be covered at the close of each day. Alternatively, fencing may be erected around open pits or trenches. At the beginning of the construction day and before pits are filled, they would be inspected for trapped animals. If any animals are found, they would be moved out of harm's way. No rodenticides would be used on project sites. Encounters with a protected species (e.g., raptors, migratory birds, or listed or special status species) would be reported to the BLM and/or the appropriate oversight agency (e.g., USFWS). Any contractor or employee who inadvertently kills or injures a protected species would immediately report the incident to the BLM and/or the appropriate oversight agencies.

If a federally listed species is located within the Project Area, work would be immediately halted to allow the appropriate federal agency to respond. Consultation with the USFWS would be initiated immediately upon discovery of a federally listed species and additional mitigation measures may be applied where necessary.

2.3.2.8 Raptors and Migratory Birds

Raptors, including Burrowing Owls

Any raptor nests within the Project Area would be identified if land clearing construction activities are scheduled during the breeding season (March 1 through August 31). All active raptor nests would be avoided. Known raptor nest sites would be checked 2 to 5 days prior to construction activities in a given area. If an active raptor nest site is discovered, an appropriate construction avoidance buffer area and timeframe for avoidance (BLM 2006), to be determined for the species and in conjunction with the BLM, would be applied; contingent upon BLM's approval, the Proponent may utilize biological monitors to allow construction to continue during the standard avoidance period.

Structure designs for the overhead power lines are approved for use in raptor areas. All such structures would be monitored by the Proponent on a regular basis to check for nests. Should nesting occur in a manner that represents an electrocution threat, appropriate authorities would be contacted to ensure safe nest removal.

If land clearing construction activities were to commence during the breeding season for burrowing owls (mid-March to August 31), a survey to identify active nests would be conducted by a qualified biologist. If evidence of breeding behavior or if an active nest was discovered, construction activities would not be allowed until consultation with the BLM biologist occurred and a plan developed for proper avoidance. However, if authorization for the project is provided prior to the breeding season of burrowing owls

(February – mid-March) and land clearing construction activities were to commence; all burrows, holes, crevices, or other cavities potentially used by burrowing owls on the construction site would be collapsed after a qualified project biologist thoroughly checks them for inhabitants. This would discourage owls from breeding on the construction site. If land clearing construction activities are scheduled to occur between September and January, no pre-clearance surveys or collapsing of burrows would be required.

Migratory Birds

If land-clearing construction activities are scheduled during the breeding season (generally defined as March 1 through August 31), the areas impacted by construction activities would be surveyed for active nests prior to equipment mobilization. If active migratory bird nests (i.e. contains eggs or young) are encountered during the surveys, land disturbing construction activities would be avoided while the birds are allowed to fledge. An appropriate construction avoidance buffer area, to be determined for the species and in conjunction with the BLM, would apply to all active nests for migratory bird species.

2.3.2.9 Cultural Resources

A cultural resource survey has been conducted of the entire proposed ROW area (Baxter 2011). No cultural resource sites were encountered during the inventory. If, during construction, any previously undiscovered cultural resources are encountered, work would immediately cease in the area of the find and the BLM would be contacted.

2.4 Alternative B – No Action

Under the No Action Alternative the Proposed Action would not be built and the electrical infrastructure in the Price and Wellington area would continue to supply electricity. The Purpose and Need of the project would not be met. Analysis of the No Action Alternative in this EA provides a baseline for analysis of potential impacts that could occur under the Proposed Action.

2.5 Alternatives Considered, but Eliminated from Further Analysis

Four action alternatives were considered in addition to the Proposed Action, but were ultimately eliminated from detailed analysis. The Proponent considered a 138kV loop to the Coal Creek Substation. Looping 138kV out to the Coal Creek Substation would require more transmission line, and the substation is not set up for expansion. The Proponent also considered installing capacitors at the Coal Creek Substation, but this would only address half of the current condition that needs to be upgraded, and thus would not meet the purpose and need for the project.

Two additional alternatives were considered following a public meeting on May 31, 2011 and the BLM's request that these sites be considered. The first of these alternatives was a location currently leased and in use by Carbon County as a gravel pit. The County intends to continue using the site and plans on requesting an extension on their BLM lease when it expires. Other reasons for eliminating this site from consideration include the following:

- Additional land disturbance would be required to connect to existing 138kV and 46kV lines.

- The Proposed Action has been located and designed to meet anticipated future power demands in Wellington; this alternative would not be suitable for local distribution in the Wellington area and would necessitate an additional substation closer to Wellington in the future.
- The anticipated 138kV line from Huntington would require additional disturbance to connect to this alternate location.

For these reasons, this site was eliminated from further consideration.

Similarly, the second alternate location was a parcel near the airport that is currently part of the County landfill and part of a proposed golf course after the landfill is retired. Besides the County's plan for future development of this site, County officials do not want the substation located in the flight path of the airport runway and RMP is opposed to locating any substations near airports as there is a higher probability a small aircraft accident could occur and impact substation operations. While transmission lines can be repaired rather quickly should an accident occur, RMP would not be able to repair damages and replace damaged substation equipment in a short period of time. Other reasons for eliminating this site from further consideration include the following:

- The reliability of service within the Carbon County area could be adversely affected if this alternate location is selected.
- Additional land disturbance would be required to connect to existing 138kV and 46kV lines.
- As noted for the gravel pit location, this site could not be used for distribution of service to the Wellington area without either excessively long distribution lines or an additional substation in the Wellington area in the future.
- The anticipated future 138 kV line from Huntington would require additional transmission line disturbance to connect to this site.

For these reasons, this second alternate location was eliminated from further consideration.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified in the ID Team Analysis Record Checklist found in **Appendix A**. The checklist indicates which resources of concern are either not present in the Project Area or would not be impacted to a degree that requires detailed analysis. Resources that could be impacted to a level requiring further analysis are described in Chapter 3 and impacts on these resources are analyzed in Chapter 4. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

3.2 General Setting

The Project Area is located in the Colorado Plateau Ecoregion (Ecoregion 20) that straddles Utah and Colorado. More specifically defined, it is on the northern edge of the arid Shale Desert (Ecoregion 20b). This area is comprised of nearly level benches, low rounded hills and badlands consisting largely of marine-derived Mancos Shale. Soils are very clayey, with high levels of salts and gypsum that swell when moist. Runoff and erosion are high. Vegetation is very sparse, and on uplands it consists mainly of mat saltbush (*Atriplex corrugata*), bud sagebrush (*Artemisia spinescens*, now called *Picrothamnus desertorum*), galleta (*Hilaria jamesii*, now called *Pleuraphis jamesii)*, and desert trumpet (*Eriogonum inflatum*). Arroyos and floodplains support greasewood (*Sarcobatus vermiculatus*), alkali sacaton (*Sporobolus airoides*), seepweed (*Suaeda torreyana*), and shadscale (*Atriplex confertifolia*) (Woods et. al. 2001).

Approximately three miles to the south of the Project Area in a similar landscape is the perennial Price River. South of this, the land rises again to the San Rafael Swell, an uplift exposing Mesozoic rocks in steep-walled canyons. This area is considered to be in the Semiarid Benchlands and Canyonlands (Ecoregion 20c; Woods et al. 2001). To the north are the Book Cliffs and Roan Cliffs, tall escarpments of shale, sandstone, and limestone that support pinyon-juniper woodlands (*Pinus osteosperma* and *Juniperus scopulorum*) at higher elevations.

The Project Area elevation is approximately 5,625 feet above mean sea level (amsl). The top of the Book Cliffs, approximately 30 miles to the north, is at 8,400 feet amsl. Precipitation in nearby Wellington averages about 8.5 inches per year with average temperatures of 64 degrees Fahrenheit (F) for a high and 29 degrees F for a low (NOAA 2008).

The region was settled in the late 19th century by Mormon pioneers. Historical uses of the area include agriculture (farming, ranching) and coal mining. Both agriculture and coal mining continue to be an important part of the economy today (Johnson 1994). Farms and ranches surround the small nearby towns of Price and Wellington, and there are operating underground coal mines scattered across the escarpments located to the north, east, and west of the Project Area.

3.3 BLM Sensitive Species

BLM and Utah sensitive species that could potentially occur in the Project Area include white-tailed prairie-dog, burrowing owl, and raptors.

A wildlife reconnaissance trip for sensitive species took place in March 2011, and white-tailed prairie-dog sign was found in the southwestern quarter of the proposed substation site. There were 10 to 12 individual white-tailed prairie-dog burrows found scattered around the lower quarter of the site and 3 or 4 complexes that had 8 to 12 burrows each. Many of the burrows had apparent prairie-dog scat near them and were in fairly good shape. One burrow was clearly active, showing tracks and fresh scat. The area surrounding the proposed substation site, including the remainder of the Project Area, provide habitat as well.

Investigation of the complexes showed that burrowing owls were also likely using the site last season. Three of the complexes had burrows with old white wash along the side. This is characteristic of a burrowing owl site. No pellets were found, but these break down quickly and do not negate the presence of burrowing owls.

Raptor nesting areas were located within a half mile of the site. Raptor habitat at the site includes juniper trees on hillsides and hilltops located to the north of the site, and drainages to the south and west that contain small stands of large cottonwood trees. No stick nests were observed.

3.4 Invasive Species and Noxious Weeds

An invasive plant is a "... species whose introduction does, or is likely to cause economic or environmental harm or harm to human health". (National Invasive Species Council, undated).

A noxious weed is "...any living stage (including seeds and reproductive parts) of a parasitic or other plant of a kind which is of foreign origin, is new to or not widely prevalent in the U.S., and can directly or indirectly injure crops, other useful plants, livestock, poultry or other interests of agriculture, including irrigation, navigation, fish and wildlife resources, or the public health" (United States Congress 1974). Noxious weeds can be designated by a state or the federal government. Utah has 27 designated noxious weeds as of March 2011.

Invasive weeds found at the Project Area include the invasive Halogeton (*Halogeton glomeratus*) and Russian thistle (Salsola kali) along the access road and in portions of the proposed substation area. No noxious weeds are known to exist in the project area.

3.5 Soils

Four soil units or soil associations have been identified in the Project Area. Generally, soils range from moderately fine textures on the tops of fans and terraces, to moderately coarse-textured soils in valley bottoms, alluvial fans, and windblown areas. Details of each soil or soils association is discussed below.

Killpack clay loam with 1 to 3 percent slopes is described as moderately deep, well drained, slightly saline soil on shale hills, derived from shale residuum. Vegetation in areas not cultivated is mainly shadscale, Indian ricegrass, and galleta. Permeability of

Killpack soil is slow, erosion is moderate, and the hazard of soil blowing is also moderate. Most areas of this unit are used for spring and fall range. (SCS 1988)

Billings is described as a silty clay loam found on alluvial fans and valley floors, formed in alluvium derived from alkaline, gypsiferous marine shale. The hazard of water erosion and soil blowing hazard is moderate. The unit is mainly used for rangeland and wildlife habitat, although it is also used for irrigated crops. (SCS 1988)

Persayo-Chipeta complex is found on shale hills with slopes of 3 to 20 percent. Its composition is 55 percent Persayo loam, 3-20 percent slopes, eroded; Chipeta silty clay loam, 3 to 20 percent slopes, eroded; and 10 percent other soils. The hazard of water erosion and soil blowing is moderate. Sheet erosion is active and in many places shallow gullies are cut into the weathered shale. (SCS 1988)

Ravola loam, 1 to 3 percent slopes, is described as a deep, well-drained soil on alluvial fans and narrow valley floors derived dominantly from sandstone and shale. Vegetation in areas that are not cultivated is galleta, shadscale and some greasewood. Permeability is moderate, runoff is medium, and the hazard of both water erosion and soil blowing is moderate. (SCS 1988)

The proposed substation ROW is predominantly Killpack clay loam with 1 to 3 percent slopes. The 138kV line in would traverse primarily Killpack clay loam and Billings gullied complex. Smaller areas of the proposed substation ROW would be on Billings gullied land complex and Persayo-Chipeta complex. The 138kV line out and the 46kV line would traverse Persayo-Chipeta complex and Ravola loam. The access road would traverse Persay-Chipeta complex. The snow fence west of the substation would be on Ravola loam.

3.6 Vegetation, excluding USFWS Designated Species and BLM Sensitive Species

The proposed substation ROW is relatively flat and slopes gently to the southeast. A reconnaissance trip that took place in early March, 2011 found Project Area vegetation to consist of a sparse, low cover of crested wheatgrass (*Agropyron cristatum*), shadscale, winterfat (*Krascheninnikovia lanata*), and mat saltbush. Although crested wheatgrass is not native, it is frequently used in range seed mixes and is considered valuable in minimizing the spread of undesirable vegetation. It is somewhat palatable to wildlife and livestock. The remaining plants noted are native and typical to the landscape of the Project Area.

4.0 ENVIRONMENTAL IMPACTS

4.1 Introduction

This section describes the potential environmental effects of Alternative A - Proposed Action and Alternative B – No Action Alternative on the physical, biological, and other resources in the Project Area described above in Chapter 3. In consideration of environmental protection measures and mitigating measures included in the Proposed Action, the remaining environmental consequences described below are unavoidable.

4.2 Direct/Indirect Impacts

4.2.1 Alternative A – Proposed Action

4.2.1.1 BLM Sensitive Animal Species

The Proposed Action would not result in substantial loss, degradation, or fragmentation of habitat, or permanently interfere with wildlife movement because the area is very small compared to the surrounding habitat area. EPMs outlined in **Section 2.3** would maintain a viable habitat for sensitive species within the Project Area, and reduce the potential to injure or kill raptors or migratory birds to a negligible level, although there is always the possibility that one or more individuals would be injured or killed as a result of project construction activities or facility operations. Project design includes features to protect animals, such as raptors, from hazards posed by the project (i.e. electrocution).

With implementation of EPMs described in **Section 2.3,** long-term impacts to burrowing owls would result from destruction of historically occupied burrows, requiring owls to relocate to other suitable habitat. Long-term impacts to burrowing owls would be negligible to minor given the availability of suitable habitat in the immediate area.

Raptor nests within the Project Area would be identified if land clearing construction activities are scheduled during the breeding season (March 1 through August 31). All active raptor nests would be avoided. Known raptor nest sites would be checked 2 to 5 days prior to construction activities in a given area. If an active raptor nest site is discovered, an appropriate construction avoidance buffer area and timeframe for avoidance, to be determined for the species and in conjunction with the BLM, would be applied. With implementation of these measures impacts to raptors from construction of the proposed project would be negligible to minor.

Injury to some individual white-tailed prairie dogs may be expected, but it is likely that most of the animals would relocate once construction activity begins. Large tracts of similar terrain and habitat are adjacent to the Project Area, so the dislocation of some individuals and loss of habitat would be minor.

Land disturbance would be minimized to that which is necessary for safe and efficient equipment installation and operation. All areas temporarily disturbed would be restored to the original contour, re-graded and re-seeded with native species.

Impacts to sensitive species from operation and maintenance of the proposed project would be negligible. Species would be expected to mostly avoid the new development due to noise and activity. Pole structure designs for the overhead power lines are approved for use in raptor areas to prevent electrocution hazards. All such structures would be monitored by the company on a regular basis. Should raptor nesting occur in a

manner that represents an electrocution threat, appropriate authorities would be contacted to ensure safe nest removal.

4.2.1.2 Invasive Species and Noxious Weeds

The presence of invasive species and noxious weeds within a vegetation community tends to make the community less diverse, as several natives are often out-competed by a single invasive species or noxious weed. Invasive species and noxious weeds could become established in disturbed areas during construction or after restoration. To reduce the potential for these types of species being introduced or spread in the project area, construction equipment and vehicles would be pressure-washed prior to mobilizing to staging areas or work sites.

The Proposed Action would include EPMs and weed management strategies (**Section 2.3**) – such as cleaning equipment and spraying known weed infestations – to prevent substantial increase of invasive species and noxious weeds within the Project Area during construction activities and for three years following completion of construction. There is likely to be negligible change in the number or cover of invasive or noxious weeds resulting from disturbance associated with construction, operation, and maintenance of the proposed project.

4.2.1.3 Soils

The Proposed Action would disturb up to 25.5 acres of soil during construction activities. However, excavated topsoil would be stockpiled and reused to help restore temporary disturbance areas after substation construction is complete. Long-term maintenance of the substation and associated infrastructure could disturb soils at the substation, on the access roads, and at pole locations. Implementation of EPMs, as identified in **Section 2.3**, and BLM stipulations, as identified in Appendix R-3, Stipulations for Surface Disturbing Activities (BLM 2008), would minimize loss of soil from erosion due to wind and water. Impacts to soils from the construction, operation, and maintenance of the proposed project would be long-term and minor.

Excess soils from site grading would be used to create the visual berm between North Coal Creek Road and the substation. Erosion control measures would be implemented and maintained while vegetation from seeding becomes established. Impacts to soils from creation of the visual berm would be long-term and minor.

4.2.1.4 Vegetation, excluding USFWS Designated Species and BLM Sensitive Species

Approximately 25.5 acres of vegetation would be disturbed by project construction, which includes improving an access road, and constructing a substation, spur roads, an overhead power line tie-in, and a snow fence. Vegetation would be removed or destroyed during construction, but temporarily disturbed areas would be re-seeded the first fall after construction finished.

The vegetation community is very widespread and, therefore, the effects would be negligible because the area impacted is small compared to the surrounding vegetation resource as a whole. As noted, in **Section 2.3**, upon construction completion, topsoil would be replaced, seeding would take place, and plants (either seeded or volunteer species) would grow into the area within 3 to 5 years on areas temporarily disturbed.

4.2.1.5 Mitigation Measures

All mitigating measures have been included in the description of the Proposed Action and EPMs (**Section 2.3**), and these have been taken into account in the impact analysis. No additional mitigation measures are proposed.

4.2.1.6 Monitoring and/or Compliance

No monitoring needs have been identified for the Proposed Action.

4.2.2 Alternative B – No Action

Under the No Action Alternative, the proposal would be rejected; there would be no direct, indirect, or cumulative impacts from the Proposed Action. Other activities in the area would continue, such as livestock grazing, recreational use, and existing utility maintenance.

4.3 Cumulative Effects Analysis

"Cumulative effects" are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions. Cumulative effects could only occur for those resources that are 1) affected by the Proposed Action and 2) affected by other actions whose impacts occur within the same area and timeframe.

The resources analyzed above in Chapter 4 that have the potential to be adversely impacted by the Proposed Action include: BLM sensitive species; invasive species and noxious weeds; soils; and vegetation. The cumulative effects area (CEA) is typically a resource-based area. For this EA, CEAs are defined as follows:

The CEA for BLM sensitive animal species is defined as 5 miles in all directions generally surrounding the Proposed Action. The CEA for invasive species and noxious weeds; soils; and vegetation is defined as the ROW plus a half mile buffer.

4.3.1 Past and Present Actions

The portion of Carbon County where the Project Area is located is generally rural and undeveloped. Past or ongoing actions that affect the same components of the environment as the Proposed Action are:

- The Project Area is within an active grazing allotment; the area has been and is being grazed.
- The Coal Creek Substation is located about 2.3 miles from the Project Area. The Project Area is within a BLM-designated utility corridor which provides for additional utility development while bundling disturbances into one area. There are two existing transmission lines in the area including the 46 kV Helper - Coal Creek Transmission Line and the 138 kV Helper - Mounds Transmission Line.
- The Project Area is within an existing oil and gas lease, UTU-80565, and several oil and gas wells have been drilled in the vicinity or are approved for drilling. An associated waste water injection well is located north of the Project Area.
- There are numerous roads within the CEA. The main road is U.S. 6; lesser roads include the North Coal Creek Road and Airport Road.

- The Project Area and CEA are within the PFO Extensive Recreation Management Area (ERMA), a 1,362,760 acre area for dispersed recreation. Though dispersed, these past and present activities use the existing roads and travel ways, as well as off-road travel. An area where significant recreation opportunities and problems are limited and explicit recreation management is not required. Minimal management actions related to the BLM's stewardship responsibilities are adequate in these areas.

4.3.2 Reasonably Foreseeable Action Scenario

The following Reasonably Foreseeable Action Scenario identifies reasonably foreseeable future actions that would cumulatively affect the same resources in the CEA as the Proposed Action and the No Action Alternative.

- Grazing in the CEA would continue in the future at present levels.
- Given the present and future demand for oil and gas, future drilling for oil and gas resources in the CEA would be expected to continue at present levels.
- The BLM is preparing an EA for the proposed Carbon County Price to East Carbon Recreation Trail, which would accommodate all terrain vehicles (ATVs), motorcycles, equestrian, bicycles and pedestrian traffic. No new construction is anticipated with the trail designation, other than comfort stations, trail markers, and signs. Maintenance of the trail would involve clearing existing roadways. Several miles of the proposed trail fall within the sensitive animal species CEA north and east of the Project Area, approximately 3.4 miles away.
- The BLM is preparing an EA for the Price River Watershed Enhancement Project, which would involve reducing/eliminating Russian olive and tamarisk along the upper Price River and its tributaries. The Price River crosses the CEA approximately 2.5 miles southwest of the Project Area.
- The BLM is preparing a programmatic EA for paleontological excavation permits in the Morrison Formation and Cedar Mountain Formation outcrops throughout the PFO management area. It is unknown whether any excavation would occur within the CEA.

4.3.3 Cumulative Impacts

Cumulative effects from grazing within the CEA have and will continue to directly affect habitat within the CEA. Potential additional development in the CEA could result from future oil and gas drilling. Increased recreational use within the CEA could result from designation of the Carbon County Price to East Carbon Recreation Trail. Increased use of motorized equipment (ATVs and motorcycles) as well as increased activity from other recreational uses could affect nearby populations of sensitive animal species and further reduce available habitat. It can also affect vegetation and soils and contribute to the spread of invasive species and noxious weeds. Overspray or drift from pesticide applications can adversely affect non-target species (BLM 2007).

Paleontological excavations could disturb local populations of sensitive animal species, stressing or displacing them in the short term, however long term impacts would not be

expected. Cumulative short- and long-term impacts to sensitive animal species would be minor and include habitat loss from surface disturbance and disturbance of animals by noise or human presence. The proposed action alternative would add 25.5 acres of surface disturbance to the cumulative effects. The no action alternative would not result in an accumulation of effects.

Past actions, such as extensive grazing and road/route development in the CEA have lead to conditions favorable for the spread of invasive species and noxious weeds. Any ground disturbing activities, such as oil and gas drilling, road improvement, or paleontological excavations, create an opportunity for establishment or expansion of invasive species or noxious weeds. If uncontrolled, invasive plant species and noxious weeds could continue their spread and establishment in the area. Projects under federal oversight would be required to monitor and treat any project-related occurrences/spread of invasive plant species. Ground disturbance associated with the reasonably foreseeable action scenario would be isolated and relatively limited, therefore cumulative impacts from the spread of invasive species or noxious weeds would be minor. The proposed action alternative would add 25.5 acres of surface disturbance to the cumulative effects. The no action alternative would not result in an accumulation of effects.

Many of the other past, present, and reasonably foreseeable future actions (such as livestock grazing, OHV use, oil and gas drilling, and utility development) have the potential to cause soil erosion and vegetation removal through surface disturbing activities. However, with planned and successful EPMs, cumulative impacts should be reduced to a negligible level. The proposed action alternative would add 25.5 acres of surface disturbance to the cumulative effects. The no action alternative would not result in an accumulation of effects.

Due to the extensive nature of the vegetative community within the CEA, the long-term loss of up to 25.5 acres, when combined with past, present, and the reasonably foreseeable action scenario, would result in negligible impacts to vegetation.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

The issue identification section of Chapter 1 identifies those issues analyzed in detail in Chapter 4. **Appendix A** provides the rationale for issues that were considered but not analyzed further. The issues were identified through the public and agency involvement process described in **Section 5.2**. The list of preparers for this EA is presented in **Section 5.3**.

Table 2 Persons, Groups, and Agencies Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Utah State Historic Preservation Office (SHPO)	Consultation for undertakings, as required by the National Historic Preservation Act (NHPA) (16 USC 470)	SHPO has concurred that the project would have No Effect on NRHP-eligible historic properties.
Paiute Tribe of Utah (PITU) Kanosh Band of Paiute Tribe Confederated Tribes of the Goshute Reservation Skull Valley Goshute Tribe Uintah Ouray Ute Tribe Hopi Tribe	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Consultation letters were sent on February 28, 2011 providing information on the project and inviting the tribes to comment and identify any concerns. The Hopi Tribe requested a copy of the Cultural Resources Survey Report.
Carbon County	Coordination with Carbon County Planning and Zoning	The project would comply with the Carbon County Plan

5.2 Summary of Public Participation

The Mathington Substation project was posted on the BLM's Environmental Notification Bulletin Board (ENBB) on March 16, 2011. No scoping letters were received as a result of that posting.

A public meeting was held May 31, 2011 during the public review period (May 19 through June 17) for the draft Final version of the EA that was posted on the ENBB. Although no official public comments were received on the draft Final EA, as a result of the meeting, the BLM requested that RMP consider two additional locations for the substation. After investigation and a thorough evaluation by RMP, both sites were removed from further consideration for the reasons provided in **Section 2.5**, above.

5.3 List of Preparers

5.3.1 BLM

Name	Title	Responsible for the Following Section(s) of this Document
Price Field Office		
Connie Leschin	Realty Specialist	Project Lead, Environmental Justice, Lands & Access
Stephanie Bauer	Rangeland Mgmt Specialist	Invasive Species and Noxious Weeds, Woodland/Forestry
Jeffrey Brower	Hydrologist	Floodplains, Hydrologic Conditions, Solid or Hazardous Wastes, Water Resources/Quality, Wetlands/Riparian
Chris Conrad	Geologist	Geology/Mineral Resources/Energy Production
Stephanie Howard	Environmental Planning Coordinator	Socio-Economics
Michael Leschin	Geologist/Paleontology	Paleontology
Kathryn Lloyd	Outdoor Recreation Planner	Recreation, Wild & Scenic Rivers, Wilderness/WSA, Visual Resources, Land with Wilderness Characteristics
Matt Madariaga	Fuels Technician	Fuels & Fire Management
Blaine Miller	Archaeologist	Native American Concerns
Dana Truman	Rangeland Management Specialist	Farmlands (Prime or Unique); Livestock Grazing; Rangeland Health Standards; Threatened, Endangered or Candidate Plant Species; Soils and Vegetation
Mike Tweddell	Rangeland Management Specialist	Wild Horses & Burros
David Waller	Wildlife Biologist	Fish & Wildlife; Migratory Birds; Threatened, Endangered, or Candidate Animal Species; BLM Sensitive Species

5.3.2 Non-BLM Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Greg Brown	Project Manager, Biologist	Overall QA
Jon Schulman	Environmental Engineer, Hydrologist	Document Preparation
Marit Sawyer	Environmental Specialist	Soils and Vegetation
Schelle Davis	Environmental Planner	Document Preparation
Jenni Prince-Mahoney	Environmental Specialist	Document Preparation

6.0 REFERENCES, GLOSSARY AND ACRONYMS

6.1 References Cited

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6.2 List of Acronyms Used in this EA

AMSL	Above Mean Sea Level
ATV	All Terrain Vehicle
BLM	Bureau of Land Management
BMP	Best Management Practice
CEA	Cumulative Effects Area
DR	Decision Record
EA	Environmental Assessment
EIS	Environmental Impact Statement
ENBB	Notification Bulletin Board
EPA	Environmental Protection Agency
EPM	Environmental Protection Measure
ERMA	Extensive Recreation Management Area
F	Fahrenheit
FLPMA	Federal Land Policy and Management Act
FONSI	Finding of No Significant Impact
LAR	Lands and Realty
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
PFO	Price Field Office
PUP	Pesticide Use Proposal
ROW	Right-of-Way
SH	State Highway
SHPO	State Historic Preservation Office
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WSA	Wilderness Study Area

APPENDICES

APPENDIX A:

Interdisciplinary Team Analysis Record Checklist

INTERDISCIPLINARY TEAM CHECKLIST

Project Title: Mathington Substation

NEPA Log Number: DOI-BLM-UT-G021-2011-0024-EA

File/Serial Number: UTU-88024

Project Leader: Connie Leschin

DETERMINATION OF STAFF: ***(Choose one of the following abbreviated options for the left column)***

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

Determi-nation	Resource	Rationale for Determination*	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
NI	Air Quality	Construction of this project would result in short-term temporary dust emissions. However, after construction is complete the impacts would be reduced.	Stephanie Howard	2/22/11
NP	Areas of Critical Environmental Concern	There are no ACEC's within the Project Area.	Kathryn Lloyd	2/16/11
NP	BLM Natural Areas**	There are no BLM Natural Areas present within the Project Area.	Kathryn Lloyd	2/16/11
PI	BLM Sensitive Animal Species	White-tailed prairie dogs are known to be in the area. There is potential for Burrowing owls. No other known BLM sensitive animal species present, based upon Utah Natural Heritage Program shapefiles (June 2010 information).	David L. Waller	2/14/11
NP	BLM Sensitive Plant Species	None present based on GIS review and potential habitat.	Dana Truman	2/28/11
NP	Cultural Resources	Cultural report shows no sites affected.	Blaine Miller	2/14/11
NI	Greenhouse Gas Emissions**	There are currently no regulatory standards for controlling GHG emissions or accepted analytical methods for evaluating project specific impacts related to GHG emissions. As a consequence, the impacts of site-specific proposals cannot be determined. Based on the nature of the action, GHG	Stephanie Howard	2/14/11

Determi-nation	Resource	Rationale for Determination*	Signature	Date
		emissions are expected to be minimal.		
NP	Environmental Justice	There are no minority or low income populations that would be disproportionately adversely effected by implementation of the Proposed Action or alternatives.	Connie Leschin	2/22/11
NP	Farmlands (Prime or Unique)	No prime or unique farmlands are mapped by NRCS soil survey within the Project Area.	Dana Truman	2/28/11
NI	Fish and Wildlife Excluding USFW Designated Species and BLM Sensitive Species	No identified deer or elk crucial habitat, according to UDWR shapefiles. The Project Area borders crucial winter mule deer habitat, to the north. The Project Area is substantial winter deer habitat. No raptor nests in the vicinity.	David Waller	2011-Feb-14
NP	Floodplains	After an inspection of USGS 7.5 minute maps of the area, it is determined no floodplains as defined by EO 11988, FEMA, or Corps of Engineers is found on or near the Project Area	Jeffrey Brower	02/14/11
NI	Fuels/Fire Management	Implementation of the proposed action would have no significant impact on Fuels/Fire Management.	Matt Madariaga	2/14/11
NI	Geology / Mineral Resources/Energy Production	The project, as proposed, will not negatively affect solid or fluid mineral resources or their acquisition. Regarding aggregate, the resources are better in other areas and fluid minerals can be accessed off-site.	Chris Conrad	2/15/11
NI	Hydrologic Conditions**	Minimal impact to groundwater. No drilling or groundwater extraction expected with this project.	Jeffrey Brower	2/14/11
PI	Invasive Species/Noxious Weeds (EO 13112)	Any surface disturbing activity could cause introduction or spread of ISNW.	Stephanie Bauer	2/14/11
NI	Lands/Access	The project, as proposed, will not affect any existing routes or ROWs. There are no conflicts with other land use authorizations as shown through search of LR2000 and the Master Title Plats.	Connie Leschin	2/14/11
NI	Livestock Grazing	This proposal is within an active grazing allotment (Hayes Wash). The 10 plus acres of disturbance could affect forage availability. However, due to the low forage production of the area, this action would likely affect only approximately 1 AUM. This minor amount is within the year to year variability, thus this proposed action is likely to have only a minor impact to the livestock grazing.	Dana Truman	2/28/11
NI	Migratory Birds	Migratory birds are present, however, there are no mapped important migratory bird habitat areas in the Project Area. No special status migratory birds are known to be in the Project Area, based upon BLM records.	David L. Waller	2/14/11
NI	Native American Religious Concerns	Letters sent March 1, 2011, no comments of concern were received.	Blaine Miller	2/14/11
NI	Paleontology	Land surface is exposed Mancos Shale, a PFYC category 2 formation where there is little likelihood of finding vertebrate fossils. If one should turn up during	Michael Leschin	2/15/11

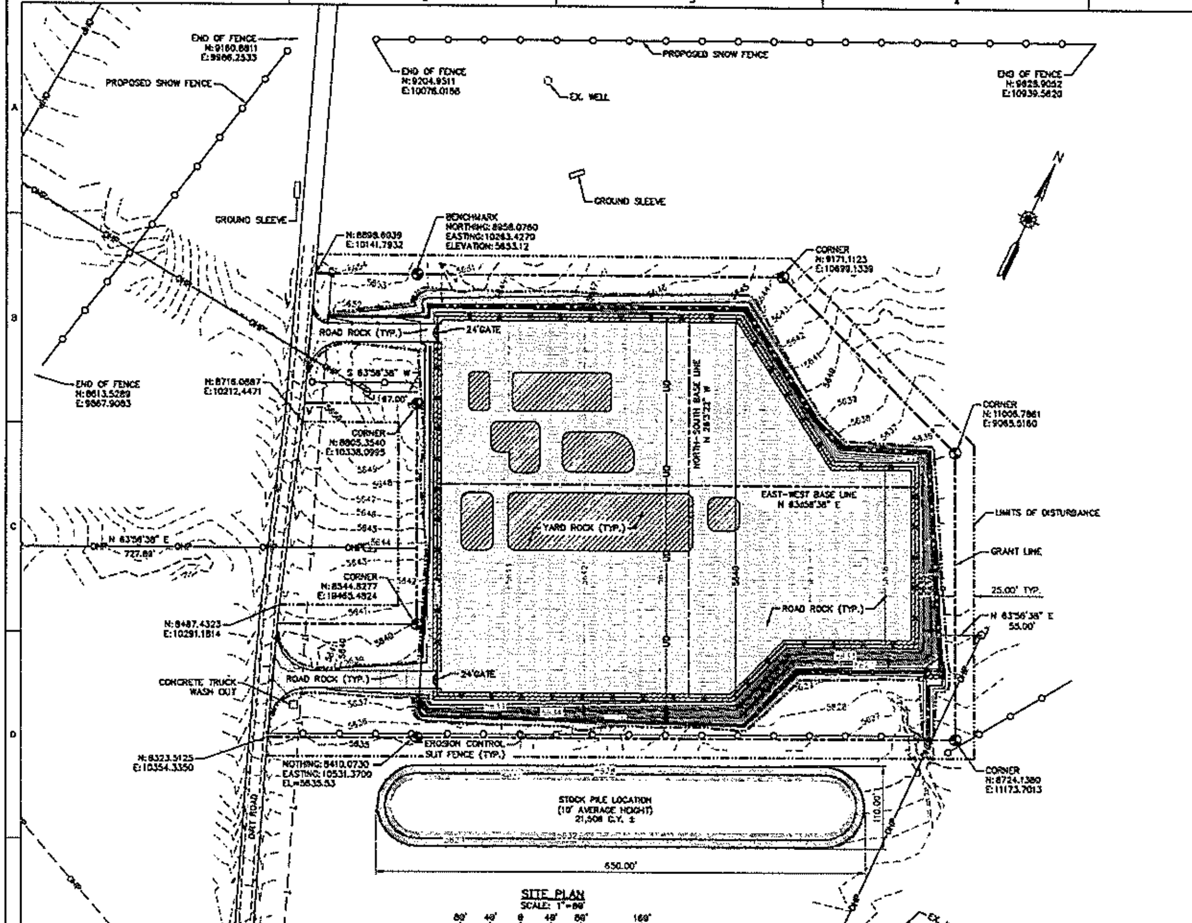
Determi-nation	Resource	Rationale for Determination*	Signature	Date
		construction, work should stop and the PFO be notified.		
NI	Rangeland Health Standards	The standards for Rangeland Health affect soils, riparian, vegetation and special status species; these standards area adequately addressed in their respective sections.	Dana Truman	2/28/11
NI	Recreation	The proposed action is in an Extensive Recreation Management Area (ERMA) where recreation opportunities and problems are limited and explicit recreation management is not required. Implementation of the project would have minimal impact on dispersed recreation in the ERMA.	Kathryn Lloyd	2/10/11
NI	Socio-Economics	Implementation of the Proposed Action would have no measureable social or economic impacts.	Stephanie Howard	2/14/11
PI	Soils	Implementation of the proposed action could mix, compact and modify the soil resource.	Dana Truman	2/28/11
NP	Threatened, Endangered or Candidate Plant Species	According to BLM records, there are no known populations or habitat for listed species within the Project Area.	Dana Truman	2/28/11
NP	Threatened, Endangered or Candidate Animal Species	No effect – because, there are no known occurrences of federally listed or candidate species in the Project Area based on GIS review and BLM records. There is no designated critical habitat present either. There would be no surface water depletions that would affect federally listed fish species that occur downstream.	David L. Waller	2/14/11
NP	Wastes (hazardous or solid)	No chemicals subject to reporting under SARA Title III will be used, produced, stored, transported, or disposed of annually in association with the project. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the project. Trash would be confined in a covered container and disposed of in an approved landfill. No burning of any waste will occur due to this project. Human waste will be disposed of in an appropriate manner in an approved sewage treatment center.	Jeffrey Brower	2/14/11
NI	Water Resources/Quality (drinking/surface/ground)	Minimal surface disturbance is planned. Surface runoff patterns will not be interrupted.	Jeffrey Brower	2/14/11
NP	Wetlands/Riparian Zones	No surface disturbing activity will be allowed within 660 feet of any water features, including springs and seeps. No surface disturbing activity will be allowed within 330 feet any riparian area.	Jeffrey Brower	2/14/11

Determi-nation	Resource	Rationale for Determination*	Signature	Date
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers within this Project Area.	Kathryn Lloyd	2/10/11
NP	Wilderness/WSA	There are no Wilderness/WSAs within this Project Area.	Kathryn Lloyd	2/10/11
NP	Woodland / Forestry	There are no merchantable woodland/forestry products within the project ROW.	Stephanie Bauer	2/14/11
PI	Vegetation Excluding USFWS Designated Species and BLM Sensitive Species	Implementation of the proposed action could remove and affect the existing vegetation.	Dana Truman	2/28/11
NI	Visual Resources	The area is within VRM Class III, which allows for moderate change to the landscape in order to partially retain the existing character of the landscape. VRM Class III objectives state that management activities may attract attention but should not dominate the view of the casual observer. The proposed project will have minimal impact on the visual resources	Kathryn Lloyd	2/10/11
NP	Wild Horses and Burros	Not within a Wild Horse or Burro Herd Management Area	Mike Tweddell	2/10/11
NP	Land with Wilderness Characteristics**	The proposed Project Area is not within an area with wilderness characteristics.	Kathryn Lloyd	2/10/11

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator		8/9/11	
Authorized Officer	Patricia Clabaugh	8/9/11	

APPENDIX B:
Schematic Drawings



SITE PLAN

SCALE: 1"=80'

80' 40' 0 40' 80' 160'

SCALE IN FEET 1"=80'

CIVIL SPECIFICATION SECTIONS:

- 02110 CLEARING AND GRUBBING
- 02120 SITE GRADING
- 02121 GENERAL EXCAVATION AND BACKFILL
- 02122 TRENCH EXCAVATION AND BACKFILL
- 02134 ROAD FINISH ROCK
- 02132 YARD FINISH ROCK
- 02130 AGGREGATE BASE COURSE
- 02136 DRAIN ROCK
- 02200 SYNTHETIC FLEX MEMBRANE LINER
- 02274 RIP RAP
- 02275 GEOTEXTILES
- 02609 CULVERT
- 02620 UNDERGROUND PLASTIC PIPING
- 02900 LANDSCAPING
- 02910 SEEDING AND EROSION CONTROL
- 02950 SOIL STERILIZATION

LAYOUT:

1. THE NORTH-SOUTH BASELINE SHALL BE LOCATED AS SHOWN (N 26°03'22" W) AND THE EAST-WEST BASELINE SHALL BE PERPENDICULAR TO THE NORTH-SOUTH BASELINE (N 63°56'38" E).
2. THE BASIS OF HORIZONTAL AND VERTICAL CONTROL IS SHOWN ON THIS SITE PLAN. THE CONTRACTOR IS RESPONSIBLE FOR SETTING PROJECT BENCHMARKS AS REQUIRED FROM THE TBM'S.
3. ALL RADII OF INTERNAL ROADWAYS ARE 5 FEET UNLESS OTHERWISE NOTED.

GRADING UNLESS OTHERWISE DESIGNATED:

1. PRIOR TO COMMENCEMENT OF ANY LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL OBTAIN A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL PERMIT OR NOTICE OF INTENT (NOI) TO BE POSTED ON SITE. THE CONTRACTOR SHALL IMPLEMENT THE BEST MANAGEMENT PRACTICES (BMP'S) AS DEFINED IN THE SWPPP.

LEGEND

- MONUMENT
- POWER POLE
- 100 GRADING POINT MARKER
- BASE LINE
- LIMITS OF CONSTRUCTION
- EDGE OF ROAD
- PROPERTY LINE
- 5530 EXISTING MAJOR CONTOUR
- 5531 EXISTING MINOR CONTOUR
- 5530 MAJOR CONTOUR
- 5531 MINOR CONTOUR
- FENCE WITH BARB
- EXISTING FENCE
- SNOW FENCE
- UD UNDERDRAIN
- OHP OVERHEAD POWER
- OHP EXISTING OVERHEAD POWER
- T EXISTING TELEPHONE
- ROAD ROCK
- YARD ROCK
- AGGREGATE BASE COURSE
- STRUCTURAL FILL
- EARTH
- RIPRAP

2. ELEVATIONS SHOWN ON THE GRADING PLAN ARE FINISHED GRADE ELEVATIONS (UNLESS NOTED OTHERWISE), WHICH IS DEFINED AS THE TOP OF FINISH ROCK WHERE YARD AND ROAD ROCK IS SHOWN. THE SUB-GRADE ELEVATIONS ARE BELOW THE FINISH ROCK, WHICH IS THE TOP OF PIT RUN ROCK, STRUCTURAL BACKFILL, AGGREGATE BASE OR UNDISTURBED EARTH. ALL GRADES SHALL BE COMPACTED AS REQUIRED IN THE SPECIFICATIONS. SEE THE TYPICAL SECTIONS SHOWN ON THE GRADING DETAIL SHEET XXXXXX.XXX.
3. A THREE (3) INCH COMPACTED THICKNESS OF BASE ROCK SHALL BE PLACED OVER THE SUBSTATION YARD AREA SUB-GRADE FOR A CONSTRUCTION PAD IF WEATHER WARRANTS.
4. THE TOP LAYER OF UNSUITABLE ORGANIC TOPSOIL WITHIN THE GRADING LIMITS SHALL BE STRIPPED TO A MINIMUM DEPTH OF SIX (6) INCHES. AFTER TOP SOIL REMOVAL THE SITE SHALL BE PROOF-ROLLED TO IDENTIFY ANY POTENTIALLY UNSUITABLE SOILS THAT CANNOT MEET COMPACTION REQUIREMENTS. ALL UNSUITABLE SOILS SHALL BE STRIPPED AND REPLACED WITH AN APPROVED RG-2 BACKFILL PER SPECIFICATIONS.
5. THE TOPSOIL AND ALL EXCAVATED SOIL THAT CANNOT BE USED FOR LANDSCAPING SHALL BE DISPOSED OF OFF-SITE UNLESS PRE-APPROVED TO STOCKPILE AT AN APPROVED LOCATION. TOPSOIL USED FOR LANDSCAPING SHALL BE STOCKPILED IN A TEMPORARY SPOILS AREA AT AN APPROVED LOCATION. RE-SEED ALL CUT AND FILL SLOPES OUTSIDE OF THE SUBSTATION PER NOTE 16.
6. CUT AND FILL SLOPES SHALL BE AT A MAXIMUM SLOPE OF 2:1. FILL SLOPES SHALL HAVE A MAXIMUM SLOPE OF 3:1.
7. IMPORTED STRUCTURAL FILL RG-2 SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER ASTM D-1557. SEE GENERAL EXCAVATION AND BACKFILL SPECIFICATION, SECTION 02121.
8. AGGREGATE BASE COURSE AND FINISH ROCK SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER ASTM D-1557. SEE SPECIFICATIONS FOR DETAILS.
9. ALL AREAS NOT DESIGNATED AS ROADWAYS WITHIN THE SUBSTATION, AND THE FIVE (5) FOOT SHOULDER ADJACENT TO AND OUTSIDE OF THE SUBSTATION FENCE, SHALL RECEIVE FOUR (4) INCHES OF YARD FINISH ROCK. THERE SHALL BE A MINIMUM OF SIX (6) INCHES OF IMPORTED STRUCTURAL FILL RG-2 FOR A SUB-GRADE IF NATIVE SOIL IS UNSUITABLE AND CANNOT MEET COMPACTION REQUIREMENTS AFTER PROOF-ROLLING. SEE TYPICAL SECTION ON DETAIL SHEET.
10. ALL AREAS DESIGNATED AS NEW ROADWAY SHALL HAVE TWELVE (12) INCHES OF AGGREGATE BASE COURSE AND SIX (6) INCHES OF ROAD FINISH ROCK. SEE TYPICAL SECTION ON DETAIL SHEET.
11. THE ACCESS ROAD CONNECTION SHALL BE GRADED AND SURFACED AS DETAILED TO THE LIMITS AS SHOWN ON THE PLANS. APPROACH WORK SHALL BE PERFORMED ACCORDING TO HIGHWAY GENERAL PROVISIONS FOR APRONS AND APPROACHES.
12. FOR GEOTECHNICAL INFORMATION REFER TO THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY PROFESSIONAL SERVICE INDUSTRIES, INC. PROJECT NO. 0595139, DATED OCTOBER 28, 2010.
13. COORDINATE PERFORATED UNDER-DRAINS WITH THE CABLE TRENCH PLAN ON SHEET XXXXXX.XXX. SEE UNDER-DRAIN DETAILS ON THE DETAIL SHEET.
14. CULVERTS SHALL BE TWELVE (12) INCHES IN DIAMETER ASTM C-76 CLASS IV REINFORCED CONCRETE PIPES.
15. CLEAR & GRADE DITCHES AS REQUIRED FOR NEW CULVERTS AND INSTALL RIPRAP AT PIPE ENDS AS DETAILED ON PLANS.
16. DISTURBED SLOPES OUTSIDE OF THE SUBSTATION AREA SHALL HAVE A CULTIVATED SURFACE SOIL OR ADEQUATE GROWING MEDIUM IN A CONDITION FAVORABLE FOR SEED GROWTH. REMOVE ALL ROCKS, WEEDS, DEBRIS AND MATTER DETRIMENTAL TO SEED GERMINATION AND GROWTH. THE SEED MIXTURE SHALL INCLUDE A VARIETY OF GRASSES WHICH ARE SUITABLE TO THE LOCAL CLIMATE, AND SHALL BE SUPPLIED BY A STATE CERTIFIED SEED VENDOR. THE SEED AND FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY THE SEED SUPPLIER. IF MULCH IS USED IT SHALL BE FREE OF NOXIOUS WEED SEEDS AND PLANTS, AND IT SHALL BE PROCESSED TO HAVE THE ABILITY TO COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL. THE CONTRACTOR SHALL USE HYDROSEEDING TECHNIQUES TO APPLY THE SEED AND MULCH. ALL SEEDS AND APPLICATION TECHNIQUES SHALL BE PRE-APPROVED. SEE NOTES ON THE LANDSCAPING PLAN.

REFERENCE DRAWINGS

GENERAL CONTRACTOR NOTES:

ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS AND UTILITY COMPANY REQUIREMENTS.

THESE DESIGN DRAWINGS PRESENT THE CIVIL CONCEPTS OF THIS PROJECT AND ARE NOT INTENDED TO SERVE AS CONTRACTOR'S SHOP DRAWINGS. CERTAIN ITEMS MAY NOT BE COMPLETELY DETAILED ON THESE DRAWINGS. SUCH ITEMS SHALL BE CONSTRUCTED TO THE CODES AND STANDARDS AS NOTED. THE STANDARDS AND REQUIREMENTS OF THE LOCAL JURISDICTION SHALL TAKE PRECEDENCE.

GRADING SHALL BE PERFORMED TO THE PLANS, ELEVATIONS, PROFILES, SECTIONS, DETAILS AND SPECIFICATIONS UNLESS APPROVAL HAS BEEN OBTAINED IN ADVANCE.

THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE OPERATION OF ALL EXISTING UTILITIES WITHIN THE CONSTRUCTION AREA THROUGHOUT THE CONSTRUCTION PROCESS AND SHALL BE RESPONSIBLE FOR REPLACEMENT OF ALL EXISTING UTILITIES WHICH ARE DISTURBED "IN KIND" AS PART OF THE CONTRACT. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE RESPECTIVE UTILITY OWNERS.

THE CONTRACTOR SHALL REQUEST LOCATES OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF EXCAVATION.

THE CONTRACTOR SHALL VERIFY THE LOCATION AND INVERT ELEVATIONS OF ALL EXISTING UTILITIES AND STRUCTURES WITHIN THE PROJECT AREA. SEE ELECTRICAL DRAWINGS TO VERIFY THE LOCATION OF EXISTING AND NEW ELECTRICAL COMPONENTS.

THE PIPE LENGTHS SHOWN ON THESE PLANS ARE ESTIMATED. THE FINAL LENGTHS SHALL BE DETERMINED BY FIELD CONDITIONS.

UTILITY SHUTDOWNS, INSPECTIONS, AND ACCEPTANCE TESTS SHALL BE COORDINATED IN ADVANCE WITH THE APPROPRIATE PARTIES.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE PROJECT OBJECTIVES WITH ALL UTILITY COMPANIES.

NOTIFY THE PROJECT ENGINEER IF ANY EXISTING UTILITY STRUCTURES (VAULTS, BOXES, RIMS, CLEANOUTS, ETC.) ARE IN CONFLICT WITH THE PROPOSED GRADING OR UTILITY PLAN.

DOWNTIME FOR UTILITIES SHALL BE HELD TO A MINIMUM AND TEMPORARY BYPASSES SHALL BE PROVIDED WHERE NECESSARY TO MAINTAIN PROPER SERVICE. DO NOT INTERRUPT UTILITIES THAT ARE SERVING FACILITIES OCCUPIED BY THE OWNER OR BY OTHERS UNLESS GRANTED IN WRITING BY THE PROJECT MANAGER OR PROJECT ENGINEER, AND ONLY AFTER ARRANGING TO PROVIDE TEMPORARY SERVICES ACCORDING TO THE REQUIREMENTS AS INDICATED.

PIPELINES WHICH ARE TO BE ABANDONED SHALL BE DONE ACCORDING TO THE GOVERNING JURISDICTION. ALL OPEN ENDS, HOLES, OR OTHER OPENINGS OF ABANDONED LINES PERMITTED TO REMAIN SHALL BE PLUGGED WITH CONCRETE. ALL COSTS INVOLVED WITH THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICES FOR THE GRADING ITEMS.

THE CONTRACTOR SHALL GIVE THE APPROPRIATE INSPECTION AGENCY TWO (2) WORKING DAYS ADVANCE NOTICE WHEN REQUESTING INSPECTIONS.

THE LOCATION OF PROPERTY LINES, EXISTING STRUCTURES, FIXTURES AND UNDERGROUND UTILITIES ARE DRAWN FROM THE BEST AVAILABLE AS-BUILT AND SURVEYED INFORMATION. THIS DOES NOT GUARANTEE THAT THE LOCATION OF EXISTING ITEMS ARE EXACT OR COMPLETE.

SITE CONSTRUCTION PRACTICES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS. THE CONTRACTOR SHALL MAINTAIN ON-SITE, LEGIBLE MATERIAL SAFETY DATA SHEETS FOR ALL HAZARDOUS MATERIALS USED ON-SITE.

ANY OFF-SITE IMPROVEMENTS FOUND DAMAGED SHALL BE REPLACED TO THE SATISFACTION OF THE INSPECTOR OR DIRECTOR OF THE AFFECTED AGENCY.

THE WORK SCHEDULE SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND WITH ANY LOCAL ORDINANCES.

THE CONTRACTOR SHALL SECURE THE JOB AT THE END OF EACH DAY. ON-DUTY AND OFF-DUTY CONTACTS AND PHONE NUMBERS FOR THE CONTRACTOR SHALL BE FURNISHED TO THE OWNER'S REPRESENTATIVE.

THE CONTRACTOR SHALL COORDINATE WITH THE FACILITY MANAGER TO MANAGE THE PROJECT'S IMPACT TO SECURITY AND SAFETY MATTERS.

ANY REVISIONS MADE TO THE APPROVED PLANS REQUIRE SUBSEQUENT APPROVAL BY THE APPROPRIATE AGENCY.

REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE TOPSOILS, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS, INCLUDING TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF SITE AT AN APPROVED LOCATION.

NO OPEN BURNING OF WASTE MATERIALS SHALL BE PERMITTED ON THE SITE WITHOUT APPROVAL FROM THE OWNERS REPRESENTATIVE AND APPROPRIATE REGULATORY AGENCIES.

DUST SHALL BE CONTROLLED AT ALL TIMES BY WATERING. DIRT DEBRIS, TRASH OR OTHER CONSTRUCTION MATERIALS SHALL BE CONTAINED WITHIN CONSTRUCTION BOUNDARIES AT ALL TIMES AND SHALL BE CLEANED AND REMOVED DAILY AS NECESSARY. EXCESS EXCAVATED MATERIALS SHALL BE PROMPTLY DISPOSED OF TO AN APPROVED LOCATION AT THE CONTRACTOR'S EXPENSE. EXCAVATED MATERIAL TO BE REUSED AS BACKFILL MAY BE TEMPORARILY STOCKPILED AS INDICATED ON THE GRADING PLAN, BUT MUST BE WATERED AND/OR COVERED TO PREVENT BLOWING ONTO ADJACENT PROPERTIES. THE CONTRACTOR SHALL ALSO PREVENT CONSTRUCTION DEBRIS FROM ENTERING ANY EXISTING STORM DRAINAGE REACHES BY IMPLEMENTING PREVENTATIVE MEASURES SUCH AS DAMMING OR TEMPORARY CLOSURES.

CODES AND STANDARDS:

AMERICAN CONCRETE INSTITUTE ACI 318, CURRENT EDITION
STATE OF UTAH PLUMBING SPECIALTY CODE, CURRENT EDITION
NFPA NATIONAL ELECTRICAL CODE, CURRENT EDITION
LOCAL EROSION AND SEDIMENT CONTROL STANDARDS
I.B.C. WITH ALL AMENDMENTS, CURRENT EDITION
LOCAL D.O.T. STANDARD SPECIFICATIONS, CURRENT EDITION
SPECIFICATIONS FOR HWY. CONSTRUCTION, CURRENT EDITION
FIRE DEPARTMENT REGULATIONS
NATIONAL FIRE PROTECTION ASSOCIATION, CURRENT EDITION

PRELIMINARY
12/01/2018

NO.	DATE	REVISIONS	ENGINEER	DES./DR.	CHECKED	APPROVED
0						

PACIFICORP

CIVIL

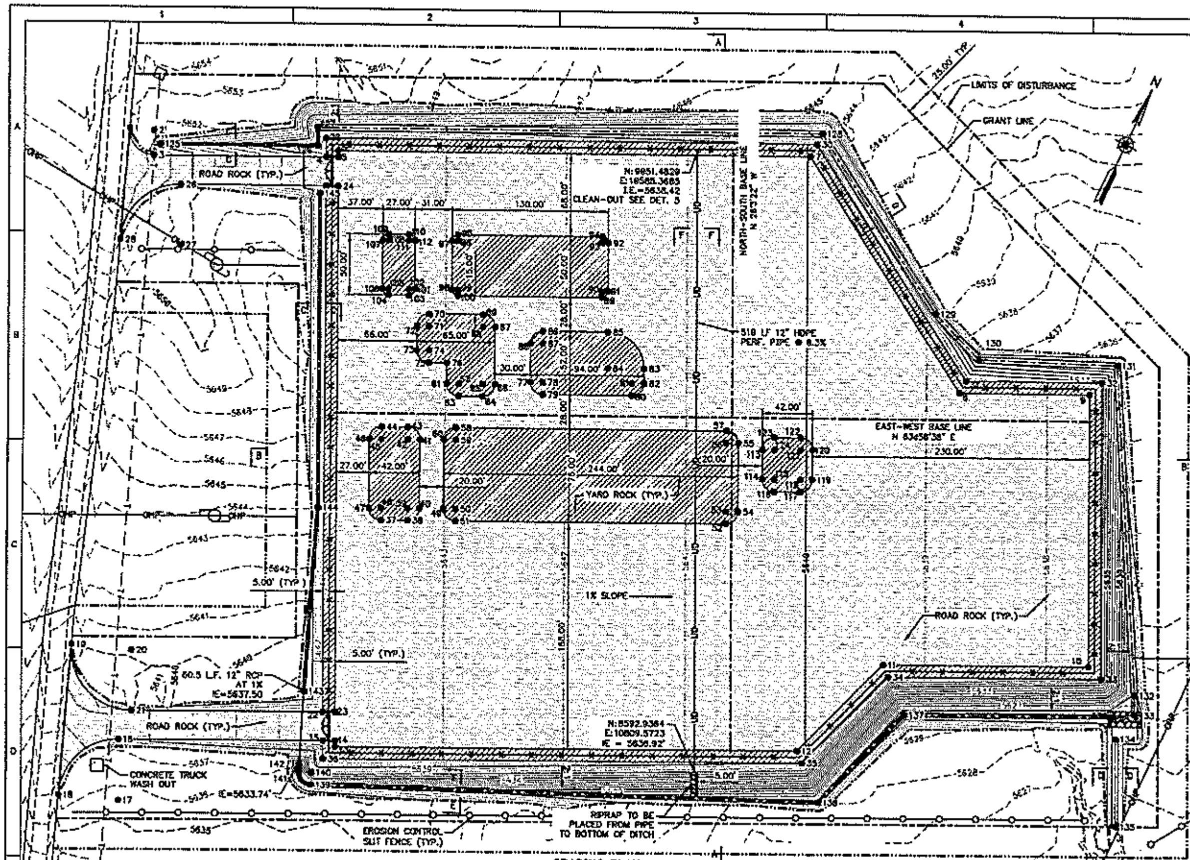
PROJ/EM 10041581 | DATE 12/01/2018 | DES. K. COOKSON | DR. R. ... | SCALE 1" = 80'

MATHINGTON SUBSTATION
CARBON COUNTY, UTAH
GRADING PLAN
OVERALL SITE LAYOUT

SHEET 1 OF 5

147146.001

REVISION 0

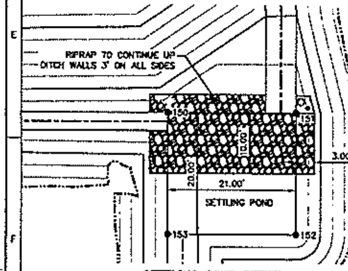


GRADING-PLAN
SCALE: 1"=50'

SCALE IN FEET
1"=50'

PRELIMINARY
12/01/2018

NOTE:
SEE SHEET 147146.003 FOR PROFILES, SECTIONS AND DETAILS.



SETTLING POND DETAIL
SCALE: 1" = 10'

SCALE IN FEET
1"=10'

GRADING DRAWING NOTES:

ESTIMATED QUANTITIES:

EARTHWORK QUANTITIES ARE ESTIMATES ONLY. THE CONTRACTOR SHALL CALCULATE THEIR OWN BID QUANTITIES. ESTIMATED QUANTITIES ARE IN BANK CUBIC YARDS WITH NO ALLOWANCE FOR SHRINK OR SWELL.

LIMITS OF CONSTRUCTION (DISTURBED) AREA	8.29	ACRES
6" DEPTH TOPSOIL REMOVAL	6,691	C.Y.
EXCAVATED NATIVE SOIL BELOW TOPSOIL	1,4815	C.Y.
TOTAL CUT (NATIVE AND TOPSOIL ROMOVAL)	21,506	C.Y.
NATIVE SOIL USED FOR STRUCTURAL FILL (RG-1)	0	C.Y.
IMPORTED STRUCTURAL FILL (RG-2)	33,129	C.Y.
ROAD FINISH ROCK	4,259	C.Y.
AGGREGATE BASE COURSE	8,518	C.Y.
YARD FINISH ROCK	744	C.Y.
TOTAL FILL (INCLUDES ALL FILL MATERIAL)	46,649	C.Y.

Point Table

Point #	Raw Description	Elevation	Northing	Easting
1	EDGE OF ROAD ROCK	5653.00	8856.06	10157.56
2	CENTER OF 20' RADIUS	5652.22	8865.34	10178.20
3	EDGE OF ROAD ROCK	5651.75	8847.37	10184.99
4	EDGE OF ROAD AND YARD ROCK	5644.00	8909.47	10311.99
5	EDGE OF ROAD AND YARD ROCK	5643.90	8913.85	10329.95
6	EDGE OF ROAD AND YARD ROCK	5643.90	8918.34	10318.75
7	EDGE OF ROAD AND YARD ROCK	5638.98	9993.65	10671.17
8	EDGE OF ROAD AND YARD ROCK	5638.73	8972.17	10668.24
9	EDGE OF ROAD AND YARD ROCK	5637.65	9019.49	10965.81
10	EDGE OF ROAD AND YARD ROCK	5637.65	8617.35	11063.84
11	EDGE OF ROAD AND YARD ROCK	5639.35	8742.65	10911.65
12	EDGE OF ROAD AND YARD ROCK	5640.07	8546.34	10878.00
13	EDGE OF ROAD AND YARD ROCK	5643.90	8478.14	10533.09
14	EDGE OF ROAD AND YARD ROCK	5643.99	8482.63	10531.79
15	EDGE OF ROAD AND YARD ROCK	5644.09	8478.24	10522.81
16	EDGE OF ROAD ROCK	5639.27	8494.50	10372.00
17	CENTER OF 50' RADIUS	5635.64	8359.59	10393.95

Point Table

Point #	Raw Description	Elevation	Northing	Easting
18	EDGE OF ROAD ROCK	5635.00	8341.48	10347.36
19	EDGE OF ROAD ROCK	5640.29	8457.49	10302.31
20	CENTER OF 50' RADIUS	5640.26	8475.59	10348.92
21	EDGE OF ROAD ROCK	5639.50	8430.57	10378.88
22	EDGE OF ROAD AND YARD ROCK	5644.00	8499.00	10512.27
23	EDGE OF ROAD AND YARD ROCK	5643.90	8504.19	10521.25
24	EDGE OF ROAD AND YARD ROCK	5643.90	8892.29	10331.49
25	EDGE OF ROAD AND YARD ROCK	5644.00	8887.93	10322.57
26	EDGE OF ROAD ROCK	5650.53	8835.57	10215.50
27	CENTER OF 50' RADIUS	5650.65	8790.85	10237.48
28	EDGE OF ROAD ROCK	5652.00	8772.53	10190.86
29	EDGE OF YARD ROCK	5644.00	8922.93	10305.39
30	EDGE OF YARD ROCK	5639.92	9162.02	10671.66
31	EDGE OF YARD ROCK	5638.67	8983.54	10869.73
32	EDGE OF YARD ROCK	5637.55	9032.86	10962.80
33	EDGE OF YARD ROCK	5637.55	8812.76	11077.21
34	EDGE OF YARD ROCK	5639.31	8733.49	10919.17

Point Table

Point #	Raw Description	Elevation	Northing	Easting
35	EDGE OF YARD ROCK	5640.63	8639.18	10886.11
36	EDGE OF YARD ROCK	5644.00	8464.77	10529.40
37	EDGE OF ROAD AND YARD ROCK	5643.53	8643.29	10484.65
38	EDGE OF ROAD AND YARD ROCK	5643.31	8672.95	10504.41
39	CENTER OF 10' RADIUS	5643.31	8681.93	10500.02
40	EDGE OF ROAD AND YARD ROCK	5643.21	8686.33	10509.00
41	EDGE OF ROAD AND YARD ROCK	5643.21	8736.63	10484.40
42	CENTER OF 10' RADIUS	5643.31	8732.24	10475.42
43	EDGE OF ROAD AND YARD ROCK	5643.31	8741.22	10471.03
44	EDGE OF ROAD AND YARD ROCK	5643.53	8731.58	10451.28
45	CENTER OF 45' RADIUS	5643.53	8722.59	10455.66
46	EDGE OF ROAD AND YARD ROCK	5643.63	8718.19	10446.67
47	EDGE OF ROAD AND YARD ROCK	5643.63	8667.88	10471.27
48	CENTER OF 10' RADIUS	5643.53	8672.27	10480.25
49	EDGE OF ROAD AND YARD ROCK	5643.91	8693.11	10526.97
50	CENTER OF 10' RADIUS	5642.91	8698.50	10535.95
51	EDGE OF ROAD AND YARD ROCK	5642.91	8693.52	10540.35
52	EDGE OF ROAD AND YARD ROCK	5640.67	8788.91	10741.50
53	CENTER OF 10' RADIUS	5640.67	8797.89	10737.19
54	EDGE OF ROAD AND YARD ROCK	5640.57	8802.29	10746.17
55	EDGE OF ROAD AND YARD ROCK	5640.57	8852.69	10721.57
56	CENTER OF 10' RADIUS	5640.67	8848.29	10712.59
57	EDGE OF ROAD AND YARD ROCK	5640.67	8857.19	10708.20
58	EDGE OF ROAD AND YARD ROCK	5642.91	8758.79	10506.98
59	CENTER OF 10' RAIDUS	5642.91	8749.81	10511.36
60	EDGE OF ROAD AND YARD ROCK	5643.91	8745.42	10502.37
61	EDGE OF ROAD AND YARD ROCK	5642.99	8787.58	10483.09
62	CENTER OF 10' RADIUS	5642.89	8791.95	10492.90
63	EDGE OF ROAD AND YARD ROCK	5642.89	8782.97	10497.37
64	EDGE OF ROAD AND YARD ROCK	5642.69	8791.75	10515.34
65	CENTER OF 10' RADIUS	5642.69	8800.73	10510.95
66	EDGE OF ROAD AND YARD ROCK	5642.59	8805.13	10519.93
67	EDGE OF ROAD AND YARD ROCK	5642.59	8847.42	10499.25
68	CENTER OF RADIUS	5642.69	8843.02	10490.27
69	EDGE OF ROAD AND YARD ROCK	5642.69	8852.01	10485.88
70	EDGE OF ROAD AND YARD ROCK	5643.14	8832.24	10445.45
71	CENTER OF 10' RADIUS	5643.14	8823.26	10449.84
72	EDGE OF ROAD AND YARD ROCK	5643.24	8818.86	10440.86
73	EDGE OF ROAD AND YARD ROCK	5643.24	8800.90	10449.64
74	CENTER OF 10' RADIUS	5643.14	8805.29	10458.63
75	EDGE OF ROAD AND YARD ROCK	5643.14	8796.31	10463.02
76	EDGE OF ROAD AND YARD ROCK	5642.99	8802.80	10476.50
77	EDGE OF ROAD AND YARD ROCK	5642.29	8820.17	10545.97
78	CENTER OF 10' RADIUS	5642.19	8824.56	10554.95
79	EDGE OF ROAD AND YARD ROCK	5642.19	8815.58	10559.35
80	EDGE OF ROAD AND YARD ROCK	5641.45	8848.65	10625.63
81	CENTER OF 10' RADIUS	5641.45	8857.66	10621.43
82	EDGE OF ROAD AND YARD ROCK	5641.35	8861.48	10630.42
83	EDGE OF ROAD AND YARD ROCK	5641.35	8872.24	10625.15
84	CENTER OF 30' RADIUS	5641.65	8859.96	10598.19
85	EDGE OF ROAD AND YARD ROCK	5641.65	8865.81	10585.62
86	EDGE OF ROAD AND YARD ROCK	5642.19	8862.29	10536.51
87	CENTER OF 10' RADIUS	5642.19	8853.31	10540.99
88	EDGE OF ROAD AND YARD ROCK	5642.29	8848.91	10531.91
89	EDGE OF ROAD AND YARD ROCK	5641.78	8908.97	10568.23

Point Table

Point #	Raw Description	Elevation	Northing	Easting
86	EDGE OF ROAD AND YARD ROCK	5642.19	8862.29	10536.51
87	CENTER OF 10' RADIUS	5642.19	8853.31	10540.99
88	EDGE OF ROAD AND YARD ROCK	5642.29	8848.91	10531.91
89	EDGE OF ROAD AND YARD ROCK	5641.78	8908.97	10568.23
90	CENTER OF 5' RADIUS	5641.79	8913.46	10566.63
91	EDGE OF ROAD AND YARD ROCK	5641.65	8915.66	10579.52
92	EDGE OF ROAD AND YARD ROCK	5641.65	8951.59	10552.95
93	CENTER OF 5' RADIUS	5641.79	8949.39	10548.46
94	EDGE OF ROAD AND YARD ROCK	5641.79	8953.89	10546.26
95	EDGE OF ROAD AND YARD ROCK	5642.98	8931.18	10438.46
96	CENTER OF 5' RADIUS	5642.99	8898.68	10440.66
97	EDGE OF ROAD AND YARD ROCK	5642.85	8894.49	10436.15
98	EDGE OF ROAD AND YARD ROCK	5642.95	8858.55	10453.73
99	CENTER OF 5' RADIUS	5642.90	8860.75	10458.23
100	EDGE OF ROAD AND YARD ROCK	5642.90	8858.26	10460.42
101	EDGE OF ROAD AND YARD ROCK	5643.28	8844.94	10425.80
102	CENTER OF 5' RADIUS	5643.31	8842.74	10421.39
103	EDGE OF ROAD AND YARD ROCK	5643.31	8838.25	10423.59
104	EDGE OF ROAD AND YARD ROCK	5643.48	8830.78	10408.32
105	CENTER OF RADIUS	5643.48	8835.27	10406.12
106	EDGE OF ROAD AND YARD ROCK	5643.53	8833.08	10401.63
107	EDGE OF ROAD AND YARD ROCK	5643.53	8869.91	10384.08
108	CENTER OF 5' RADIUS	5643.48	8871.21	10388.55
109	EDGE OF ROAD AND YARD ROCK	5643.48	8875.70	10386.35
110	EDGE OF ROAD AND YARD ROCK	5643.31	8883.17	10401.63
111	CENTER OF 5' RADIUS	5643.31	8878.87	10403.82
112	EDGE OF ROAD AND YARD ROCK	5643.28	8880.87	10408.31
113	EDGE OF ROAD AND YARD ROCK	5640.37	8858.89	10741.74
114	EDGE OF ROAD AND YARD ROCK	5640.37	8835.33	10752.28
115	CENTER OF 10' RADIUS	5640.27	8839.72	10761.26
116	EDGE OF ROAD AND YARD ROCK	5640.27	8830.74	10765.65
117	EDGE OF ROAD AND YARD ROCK	5640.05	8840.40	10785.42
118	CENTER OF 10' RADIUS	5640.05	8849.38	10781.03
119	EDGE OF ROAD AND YARD ROCK	5639.95	8853.78	10790.01
120	EDGE OF ROAD AND YARD ROCK	5639.95	8875.34	10779.47
121	CENTER OF 10' RADIUS	5640.05	8870.95	10770.48
122	EDGE OF ROAD AND YARD ROCK	5640.05	8879.93	10766.09
123	EDGE OF ROAD AND YARD ROCK	5640.27	8870.27	10746.33
124	CENTER OF 10' RADIUS	5640.27	8861.28	10750.72
125	C.L. OF DITCH BOTTOM	5649.48	8857.68	10185.54
126	C.L. OF DITCH BOTTOM	5642.40	8914.47	10301.72
127	C.L. OF DITCH BOTTOM	5641.07	8927.49	10293.36
128	C.L. OF DITCH BOTTOM	5636.90	9111.60	10672.08
129	C.L. OF DITCH BOTTOM	5635.99	9021.67	10821.60
130	C.L. OF DITCH BOTTOM	5634.07	9004.22	10870.34
131	C.L. OF DITCH BOTTOM	5633.00	9051.10	10974.68
132	C.L. OF DITCH BOTTOM	5625.00	8813.05	11108.52
133	C.L. OF DITCH BOTTOM	5623.00	8798.58	11113.69
134	C.L. OF DITCH BOTTOM	5623.00	8773.58	11118.01
135	C.L. OF DITCH BOTTOM	5623.00	8798.54	11141.81
136	C.L. OF DITCH BOTTOM	5623.00	8769.10	11099.64
137	C.L. OF DITCH BOTTOM	5624.00	8713.50	10945.01
138	C.L. OF DITCH BOTTOM	5625.00	8616.23	10912.55
139	C.L. OF DITCH BOTTOM	5633.00	8441.40	10529.02
140	CENTER OF 10' RADIUS	5636.25	8450.49	10525.67
141	C.L. OF DITCH BOTTOM	5633.20	8446.46	10518.52
142	C.L. OF DITCH BOTTOM	5633.24	8452.80	10514.03
143	C.L. OF DITCH BOTTOM	5637.00	8587.09	10490.93
144	C.L. OF DITCH BOTTOM	5642.00	8649.18	10433.66
145	C.L. OF DITCH BOTTOM	5642.00	8880.31	10320.65
146	NORTH-SOUTH BASELINE	5640.62	9954.19	10812.31
147	NORTH-SOUTH BASELINE	5640.62	8620.31	10829.31
148	WEST-EAST BASELINE	5643.92	8724.31	10411.40
149	WEST-EAST BASELINE	5637.83	9000.60	10976.47
150	EDGE OF SETTLING POND	5623.00	8790.45	11098.98
151	EDGE OF SETTLING POND	5623.00	8799.80	11117.64
152	EDGE OF SETTLING POND	5623.00	8781.71	11126.63
153	EDGE OF SETTLING POND	5623.00	8772.49	11107.76

NO.	DATE	REVISIONS	ENGINEER	DES./DR.	CHECKED	APPROVED

PACIFICORP

CIVIL

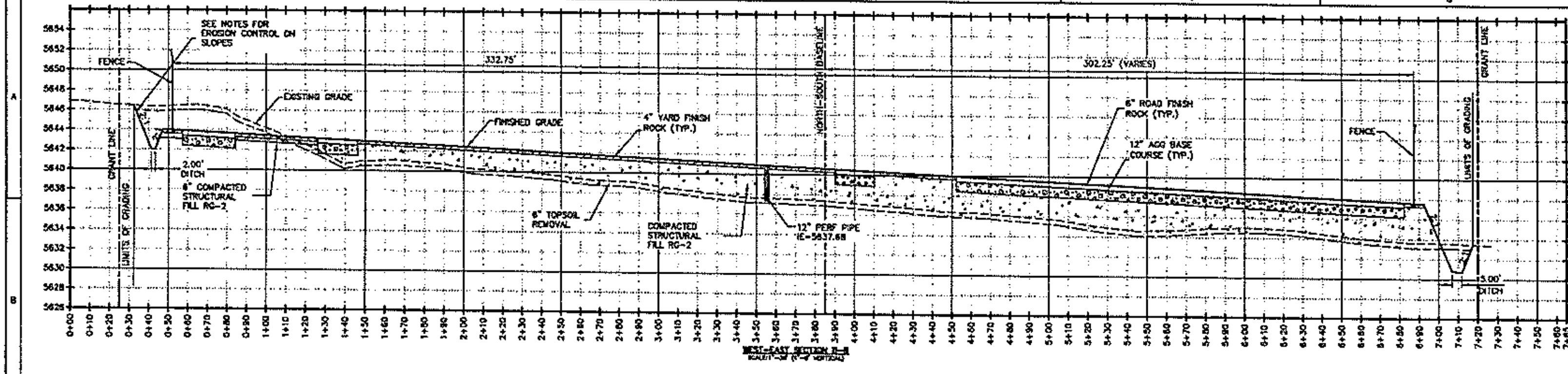
PROJECT 10041581
DATE 12/01/2018

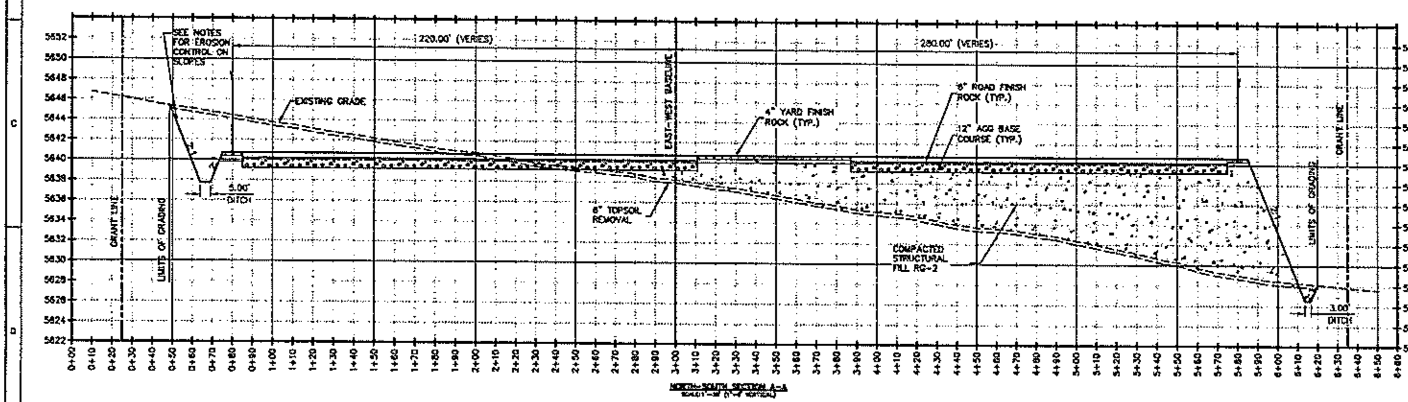
MATHINGTON SUBSTATION
CARBON COUNTY, UTAH
GRADING PLAN
SITE DEVELOPMENT

SHEET 2

147146.002

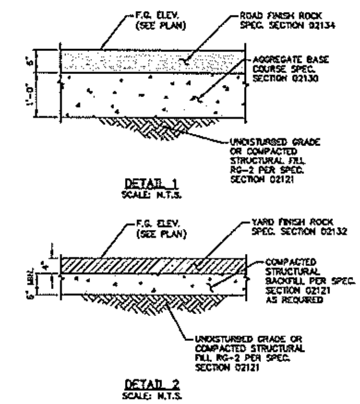
REVISION 0

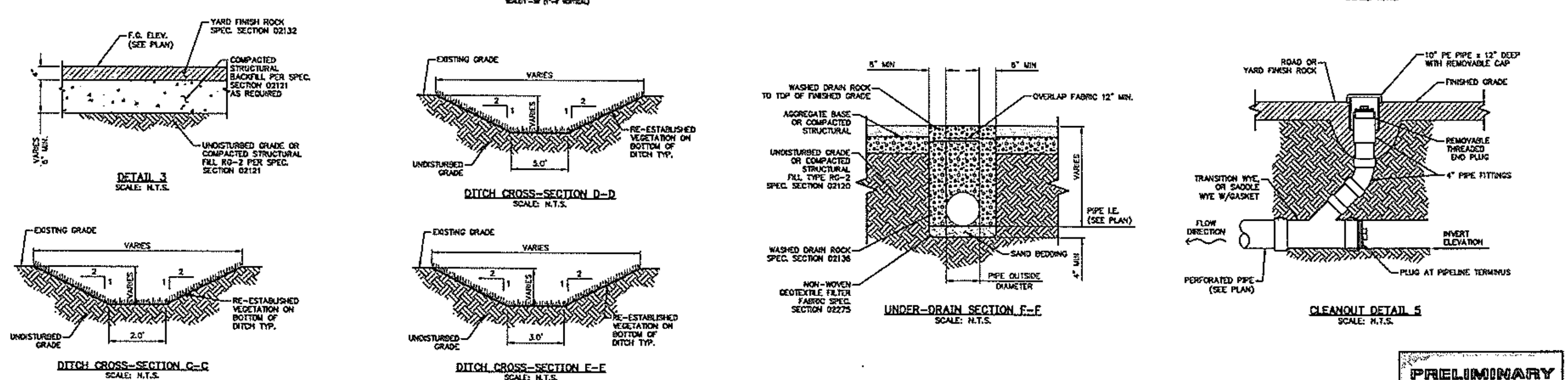

SEE NOTES FOR EROSION CONTROL ON SLOPES
FENCE
332.75'
302.25' (VARIES)
EXISTING GRADE
FINISHED GRADE
4" YARD FINISH ROCK (TYP.)
6" ROAD FINISH ROCK (TYP.)
12" AGG BASE COURSE (TYP.)
NORTH-SOUTH BASELINE
GRANT LINE
UNITS OF GRADING
2.00' DITCH
6" COMPACTED STRUCTURAL FILL RG-2
6" TOPSOIL REMOVAL
COMPACTED STRUCTURAL FILL RG-2
12" PERF PIPE IE=5637.68
5.00' DITCH
WEST-EAST SECTION B-B


SEE NOTES FOR EROSION CONTROL ON SLOPES
220.00' (VERIES)
280.00' (VERIES)
EXISTING GRADE
EAST-WEST BASELINE
4" YARD FINISH ROCK (TYP.)
6" ROAD FINISH ROCK (TYP.)
12" AGG BASE COURSE (TYP.)
GRANT LINE
UNITS OF GRADING
5.00' DITCH
6" TOPSOIL REMOVAL
COMPACTED STRUCTURAL FILL RG-2
3.00' DITCH
NORTH-SOUTH SECTION A-A

EROSION CONTROL NOTES:

DISTURBED SLOPES OUTSIDE OF THE SUBSTATION AREA SHALL HAVE A CULTIVATED SURFACE SOIL OR ADEQUATE GROWING MEDIUM IN A CONDITION FAVORABLE FOR SEED GROWTH. REMOVE ALL ROCKS, WEEDS, DEBRIS AND MATTER DETRIMENTAL TO SEED GERMINATION AND GROWTH. THE SEED MIXTURE SHALL INCLUDE A VARIETY OF GRASSES WHICH ARE SUITABLE TO THE LOCAL CLIMATE AND SHALL BE SUPPLIED BY A STATE CERTIFIED SEED VENDOR. THE SEED AND FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY THE SEED SUPPLIER. IF MULCH IS USED IT SHALL BE FREE OF NOXIOUS WEED SEEDS AND PLANTS, AND IT SHALL BE PROCESSED TO HAVE THE ABILITY TO COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL. THE CONTRACTOR SHALL USE HYDROSEEDING TECHNIQUES TO APPLY THE SEED AND MULCH. ALL SEEDS AND APPLICATION TECHNIQUES SHALL BE PRE-APPROVED. SEE NOTES ON THE LANDSCAPING PLAN.


F.G. ELEV. (SEE PLAN)
ROAD FINISH ROCK SPEC. SECTION 02134
AGGREGATE BASE COURSE SPEC. SECTION 02130
UNDISTURBED GRADE OR COMPACTED STRUCTURAL FILL RG-2 PER SPEC. SECTION 02121
DETAIL 1
SCALE: N.T.S.
YARD FINISH ROCK SPEC. SECTION 02132
COMPACTED STRUCTURAL BACKFILL PER SPEC. SECTION 02121 AS REQUIRED
UNDISTURBED GRADE OR COMPACTED STRUCTURAL FILL RG-2 PER SPEC. SECTION 02121
DETAIL 2
SCALE: N.T.S.


F.G. ELEV. (SEE PLAN)
YARD FINISH ROCK SPEC. SECTION 02132
COMPACTED STRUCTURAL BACKFILL PER SPEC. SECTION 02121 AS REQUIRED
UNDISTURBED GRADE OR COMPACTED STRUCTURAL FILL RG-2 PER SPEC. SECTION 02121
DETAIL 3
SCALE: N.T.S.
EXISTING GRADE
VARIES
RE-ESTABLISHED VEGETATION ON BOTTOM OF DITCH TYP.
UNDISTURBED GRADE
5.0'
DITCH CROSS-SECTION D-D
SCALE: N.T.S.
2.0'
DITCH CROSS-SECTION C-C
SCALE: N.T.S.
3.0'
DITCH CROSS-SECTION E-E
SCALE: N.T.S.
WASHED DRAIN ROCK TO TOP OF FINISHED GRADE
OVERLAP FABRIC 12" MIN.
AGGREGATE BASE OR COMPACTED STRUCTURAL
UNDISTURBED GRADE OR COMPACTED STRUCTURAL FILL TYPE RG-2 SPEC. SECTION 02120
PIPE I.E. (SEE PLAN)
WASHED DRAIN ROCK SPEC. SECTION 02136
SAND BEDDING
NON-WOVEN GEOTEXTILE FILTER FABRIC SPEC. SECTION 02275
PIPE OUTSIDE DIAMETER
UNDER-DRAIN SECTION F-F
SCALE: N.T.S.
ROAD OR YARD FINISH ROCK
10" PE PIPE x 12" DEEP WITH REMOVABLE CAP
FINISHED GRADE
REMOVABLE THREADED END PLUG
4" PIPE FITTINGS
TRANSITION WYE, OR SADDLE WYE W/GASKET
FLOW DIRECTION
INVERT ELEVATION
PERFORATED PIPE (SEE PLAN)
PLUG AT PIPELINE TERMINUS
CLEANOUT DETAIL 5
SCALE: N.T.S.

PRELIMINARY
12/01/2018

NO.	DATE	REVISIONS	ENGINEER	DES./DR.	CHECKED	APPROVED

PACIFICORP

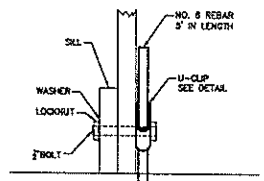
CIVIL

PRO/ER#	10041561	SUBSTATION DWG
PJ		PROJECT DWG
DATE	12/01/2018	
ENG. C. HUNTING	DES. K. COOKSON	APPROVAL DWG
DR. K. COOKSON	CH. B. REGORS	
SCALE	AS NOTED	

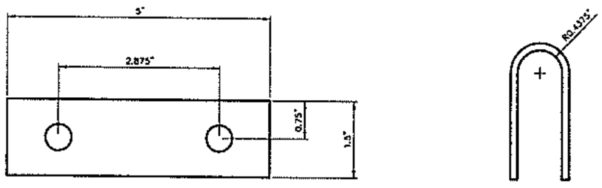
MATHINGTON SUBSTATION
CARBON COUNTY, UTAH
GRADING PLAN
PROFILES AND DETAILS

SHEET 147146.003

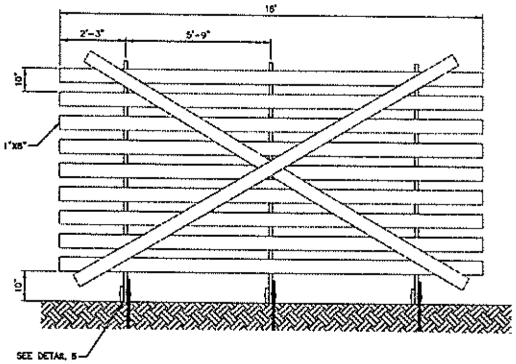
REVISION 0

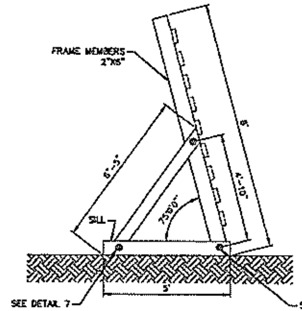


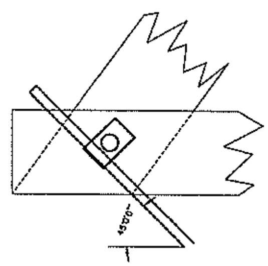
DETAIL 6
SCALE: N.T.S.



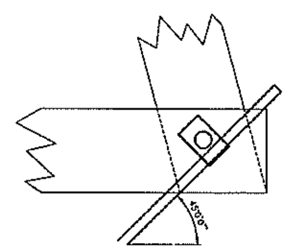
U-CLIP DETAIL
SCALE: N.T.S.







DETAIL 7
SCALE: N.T.S.



DETAIL 8
SCALE: N.T.S.

MATERIAL AND FABRICATION NOTES:

1. ALL LUMBER USED FOR THE SNOW FENCE SHALL BE FROM ON OF THE FOLLOWING: LODGEPOLE PINE, PONDEROSA PINE, ENGELMANN SPRUCE, DOUGLAS FIR, HEM FIR, OR WESTERN LARCH ROUGH DIMENSION LUMBER.
2. FOR 1" LUMBER PROVIDE WESTERN WOOD PRODUCTS ASSOCIATION NO. 3, TREATED FOR 2" LUMBER USED FOR SILL AND FRAMEWORK, USE NO. 2, TREATED. TREATED LUMBER SHALL BE DRIED TO A MOISTURE CONTENT OF 19 PERCENT AFTER TREATMENT.
3. USE GRADE 60 REINFORCEMENT BARS, GALVANIZED FOR ANCHORING SYSTEM.
4. PLATED NAILS SHALL BE IN ACCORDANCE WITH ASTM B 633, SC3, OR ASTM A641, CLASS I COATING.

   BOLTS, NUTS, AND WASHERS SHALL BE IN ACCORDANCE WITH ASTM A307, GRADE A, ASTM A563, AND ASTM F436 RESPECTIVELY. HARDWARE SHALL BE GALVANIZED.
5. FRAMEWORK SHALL BE ASSEMBLED USING A307 ½" ø BOLTS. SLATS MAY BE ATTACHED TO FRAMEWORK USING PLATED NAILS.
6. THE U-PLATE SHALL BE FABRICATED FROM ALUMINUM OR OTHER MATERIAL THAT IS RESISTANT TO THE ELEMENTS OF THE WEATHER.

PRELIMINARY
12/01/2010

NO.	DATE	BY	REVISIONS	ENGINEER	DES./DR.	CHECKED	APPROVED

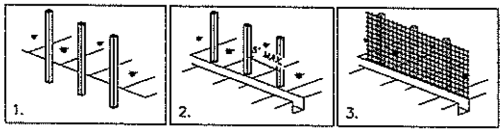
PACIFICORP

CIVIL

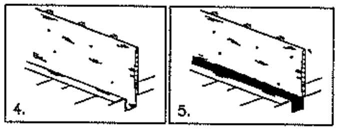
PROJ/EFA	10041581
PJ	
DATE	12/01/2010
DWG	C. HUNTING
DES.	K. COOKSON
DR.	K. COOKSON
CK.	B. ROGERS
SCALE	N.T.S.
DISCIPLINE DWG.	
PROJECT DWG.	
APPROVAL DWG.	

MATHINGTON SUBSTATION
CARBON COUNTY, UTAH
GRADING PLAN
WYOMING SNOW FENCE

SHEET 4
147146.004
REVISION B

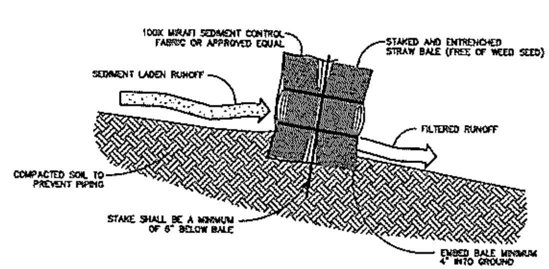


"POST AND MESH" INSTALLATIONS SHALL BE SUPPORTED BY GALVANIZED STEEL WIRE MESH (14 GAGE MIN., 6" X 6" OPENINGS MAXIMUM) AND WOOD OR STEEL POSTS 3' IN LENGTH.



"SEDIMENT CONTROL FABRIC" STANDARD MIRAFI 100X OR APPROVED EQUAL IS TO BE USED FOR INSTALLATIONS OF SHORT DURATION. THE FABRIC IS CUT ON SITE TO THE DESIRED WIDTH, UNROLLED ALONG THE LENGTH OF THE BARRIER AND DRAPED OVER THE BARRIER. THE FABRIC TOE IS SECURED WITH ROCKS OR DIRT AND THE FABRIC COVERING THE BARRIER IS SECURED TO THE BARRIER WITH TWINE, STAPLES, OR SIMILAR DEVICES. AFTER THE CONSTRUCTION AREA IS STABILIZED AND EROSION ACTIVITY CURTAILED, THE SEDIMENT BARRIERS ARE REMOVED AND THE CONTAINED SEDIMENT IS LEVELED, SEEDED, AND MULCHED. SPECIAL PROTECTION OF THE SEED BED MAY BE NECESSARY IF THE LAYERS ARE OVER A FOOT THICK.

SILT FENCE CONSTRUCTION SEQUENCE
SCALE: N.T.S.



"STRAW BALE BARRIERS"

BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE ON THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.

ALL BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED. STRAW BALES SHALL BE INSTALLED SO THAT BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES IN ORDER TO PREVENT DETERIORATION OF THE BINDINGS.

THE BARRIER SHALL BE ENTRENCHED AND BACK FILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF 4 INCHES. THE TRENCH MUST BE DEEP ENOUGH TO REMOVE ALL GRASS AND OTHER MATERIAL WHICH MIGHT ALLOW UNDERFLOW. AFTER THE BALES ARE STAKED AND CHINKED (FILLED BY WEDGING), THE EXCAVATED SOIL SHALL BE BACK FILLED AGAINST THE BARRIER. BACK FILL SOIL SHALL CONFORM TO THE GROUND LEVEL ON THE DOWNHILL SIDE AND SHALL BE BUILT UP TO 4 INCHES AGAINST THE UPHILL SIDE OF THE BARRIER.

EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST 2 STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER. STAKES OR RE BARS SHALL BE DRIVEN DEEP ENOUGH INTO THE GROUND TO SECURELY ANCHOR THE BALES. STAKES SHOULD NOT EXTEND ABOVE THE BALES BUT INSTEAD SHOULD BE DRIVEN IN FLUSH WITH THE TOP OF THE BALE FOR SAFETY REASONS.

THE GAPS BETWEEN THE BALES SHALL BE CHINKED (FILLED BY WEDGING) WITH STRAW TO PREVENT WATER FROM ESCAPING BETWEEN THE BALES. LOOSE STRAW SCATTERED OVER THE AREA IMMEDIATELY UPHILL FROM A STRAW BALE BARRIER TENDS TO INCREASE BARRIER EFFICIENCY. WEDGING MUST BE DONE CAREFULLY IN ORDER NOT TO SEPARATE THE BALES.

INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

STRAW BALE BARRIERS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE, ORIENTED PERPENDICULAR TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.

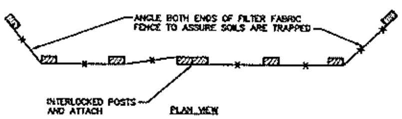
THE REMAINING STEPS FOR INSTALLING A STRAW BALE BARRIER FOR SHEET FLOW APPLICATIONS APPLY.

THE BARRIER SHALL BE EXTENDED TO SUCH A LENGTH THAT THE BOTTOMS OF THE END BALES ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE TO ASSURE THAT SEDIMENT-LADEN RUNOFF WILL FLOW EITHER THROUGH OR OVER THE BARRIER BUT NOT AROUND IT.

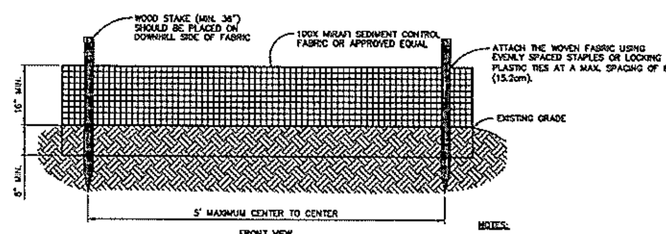
STRAW BALE SILT FENCE DETAIL
SCALE: N.T.S.

EROSION CONTROL NOTES:

1. CONTROLLING SEDIMENT TRANSPORT AND PREVENTING AND/OR CORRECTING PROBLEMS ASSOCIATED WITH EROSION AND RUNOFF PROCESSES WHICH COULD OCCUR BOTH DURING AND AFTER PROJECT CONSTRUCTION WILL BE CLOSELY MONITORED. PERIODIC MAINTENANCE AND INSPECTION OF SEDIMENT CONTROL DEVICES WILL BE SCHEDULED.
2. THE CONTRACTOR SHALL COMPLY WITH CARBON COUNTY AND OTHER GOVERNING AGENCIES FOR TEMPORARY EROSION CONTROL MEASURES.
3. EROSION CONTROL- SHOULD SILT LEAVE THE SITE OR EROSION OCCUR, THE CONTRACTOR SHALL BE RESPONSIBLE AND SHOULD TAKE CORRECTIVE ACTION AND REPAIR ANY DAMAGE CAUSED BY THE SILT OR EROSION IMMEDIATELY. ALL COSTS ASSOCIATED WITH THE PREPARATION, MODIFICATION AND APPROVAL OF THE PLAN WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. BEFORE CONSTRUCTION BEGINS, THE LIMITS OF DISTURBANCE BOUNDARY SHALL BE FLAGGED ON SITE AND APPROVED BY PACIFICORP. UNDER NO CIRCUMSTANCES SHALL SITE DISTURBANCE OCCUR OUTSIDE THE DESIGNATED AREAS AT ANY TIME DURING CONSTRUCTION.
4. EXCAVATION AND EMBANKMENT OPERATIONS SHALL PROCEED IN SUCH A MANNER SO THAT FINISHING OF SLOPES, INCLUDING REVEGETATION, SHALL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER ROUGH GRADING. ALL SLOPES 2:1 OR FLATTER SHALL BE SCARIFIED WITH HEAVY EQUIPMENT, LEAVING TRACKS PERPENDICULAR TO THE SLOPE. THE TOPS OF ALL CUT SLOPES IN SOIL SHALL BE ROUNDED FOR A HORIZONTAL DISTANCE OF THREE FEET BEYOND THE CATCH POINT. SLOPE ROUNDING SHALL OCCUR AS THE SLOPE IS BEING BROUGHT DOWN. THE OVERALL SHAPE, HEIGHT AND GRADE OF ANY CUT AND/OR FILL SLOPE SHALL BE DEVELOPED IN CONCERT WITH THE EXISTING NATURAL CONTOURS. SCALE AND VEGETATION OF NATURAL TERRAIN.
5. STABILIZATION PRACTICES MAY INCLUDE, BUT NOT BE LIMITED TO TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, GEOTEXTILES, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PRESERVATION OF NATURAL VEGETATION, AND OTHER APPROPRIATE MEASURES. USE OF IMPERVIOUS SURFACES FOR STABILIZATION SHALL BE AVOIDED. EXCEPT AS PROVIDED BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE IN DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 15 DAYS AFTER ACTIVITY IN THAT PORTION OF THE SITE HAS PERMANENTLY CEASED.
   (A) WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 15TH DAY AFTER CONSTRUCTION ACTIVITY PERMANENTLY CEASES IS PRECLUDED BY DEEP SNOW OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
   (B) WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING WILL RESUME WITHIN 15 WORKING DAYS, TEMPORARY STABILIZATION MEASURES NEED NOT BE INITIATED ON THAT PORTION OF THE SITE.
6. SPECIFICALLY OUTLINED DISTURBED AREAS, BOTH ON AND OFF-SITE SHALL BE REVEGETATED. THESE AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO ALL UNSURFACED AREAS WITHIN THE FLAGGED LIMITS OF DISTURBANCE, STAGING AND STORAGE AREAS, MATERIAL WASTE AREAS, UNDERGROUND UTILITY CONSTRUCTION AREAS, BENCHED AREAS, AND TEMPORARY OR EXISTING ACCESS ROADS USED FOR CONSTRUCTION ACTIVITIES. CUT AND FILL SLOPES OVER 3:1 REQUIRE THE PLACEMENT OF EROSION CONTROL/REVEGITATION MATTING. SLOPES LESS THAN 3:1 MAY BE SPRAYED WITH TACKIFIER.
7. SEDIMENT TRAPS MUST OUTLET ONTO STABILIZED (PREFERABLY UNDISTURBED) GROUND, OR LEFT TO PERCOLATE INTO THE GROUND.
8. CONTROLLED OUTLETS SHALL DIRECT COLLECTED RUNOFF THROUGH SILT FENCES OR STRAW BALES.
9. TYPICAL FUGITIVE DUST SHALL BE CONTROLLED BY WATERING AND/OR CHEMICAL STABILIZATION, PROVIDING VEGETATIVE OR SYNTHETIC COVER AND WIND BREAKS CONSISTENT WITH THE COUNTY OF CARBON AND THE STATE OF UTAH REQUIREMENTS.
10. SEE CONSTRUCTION SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

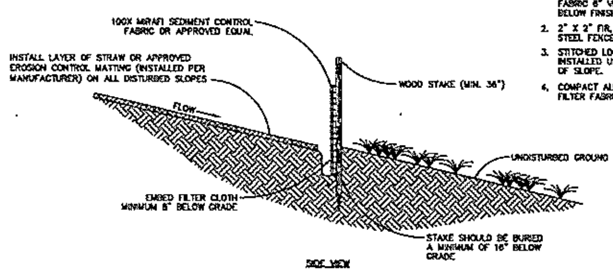


PLAN VIEW



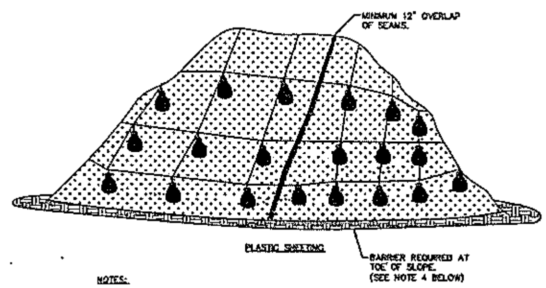
FRONT VIEW

NOTES:
1. BURY BOTTOM OF FILTER FABRIC 8" VERTICALLY BELOW FINISHED GRADE.
2. 2" X 2" FIR, PINE OR STEEL FENCE POSTS.
3. STITCHED LOOPS TO BE INSTALLED UPHILL SIDE OF SLOPE.
4. COMPACT ALL AREAS OF FILTER FABRIC TRENCH



SIDE VIEW

SILT FENCE DETAIL
SCALE: N.T.S.

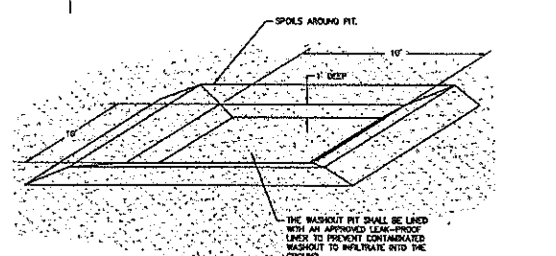


NOTES:
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. BARRIER REQUIRED AT TOE OF STOCK PILE.
3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 18' GRID SPACING IN ALL DIRECTIONS.
4. BARRIERS SHALL BE CONSTRUCTED WITH SEDIMENT FENCES, MULCH BERMS, CUPPINGS, STRAW WATTLES, OR OTHER APPROVED MATERIALS.

STOCKPILE OR SURCHARGE SHEETING DETAIL
SCALE: N.T.S.

REVEGETATION NOTES:

1. RECOMMENDED SEEDING MIXTURES MUST BE DONE ON A SITE SPECIFIC BASIS WHICH ACCOUNTS FOR THE FOLLOWING: SOIL PROPERTIES, CLIMATIC FACTORS, TOPOGRAPHIC POSITION AND FEASIBILITY.
2. VEGETATIVE PLANTING SHALL BE DONE WHERE DEEMED NECESSARY TO HASTEN THE RETURN OF PRE-EXISTING SITE CHARACTERISTICS AND ON ANY FINISHED SLOPE WHICH WILL REMAIN UNDISTURBED FOR AT LEAST 10 YEARS.
3. ALL DISTURBED OPEN SPACE AREAS, AND CUT AND FILL AREAS, SHALL RECEIVE AN ACCEPTABLE SEED MIX.
4. SEED MIX SHALL BE APPLIED AT A RATE SO THAT GERMINATION AND SUBSEQUENT COVERAGE REACHES 80 PERCENT IN A REPRESENTATIVE 10' x 10' AREA. IF COVERAGE DOES NOT REACH 80 PERCENT, RESEEDING MUST OCCUR.
5. APPROPRIATE FERTILIZER SHALL BE APPLIED TO ALL SLOPES RECEIVING SEED. APPLICATION RATES OF THE FERTILIZER SHALL BE STRICTLY ADHERED TO.



WASHING OUT OF CONCRETE TRUCKS AND RINSING OF THE CONCRETE TRUCK CHUTES SHALL BE STRICTLY MONITORED TO AVOID THE CONTAMINATION OF DOWNSTREAM WATERWAYS. A WASHOUT PIT SHALL BE CONSTRUCTED FOR CONCRETE TRUCK WASHING. THE LOCATION SHALL BE COORDINATED WITH THE OWNER PRIOR TO CONSTRUCTION AND SHALL COMPLY TO THE REQUIREMENTS OF THE DEPARTMENT OF ENVIRONMENTAL QUALITY AND DOUGLAS COUNTY AND SHALL BE REMOVED AFTER COMPLETION OF THE PROJECT. ALL EXCESS WASHOUT AND CONCRETE SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL LOCATION.

CONTRETE TRUCK WASHOUT PIT
SCALE: N.T.S.

PRELIMINARY
12/01/2018

NO.	DATE	REVISIONS	ENGINEER	DES./DR.	CHECKED	APPROVED

PACIFICORP

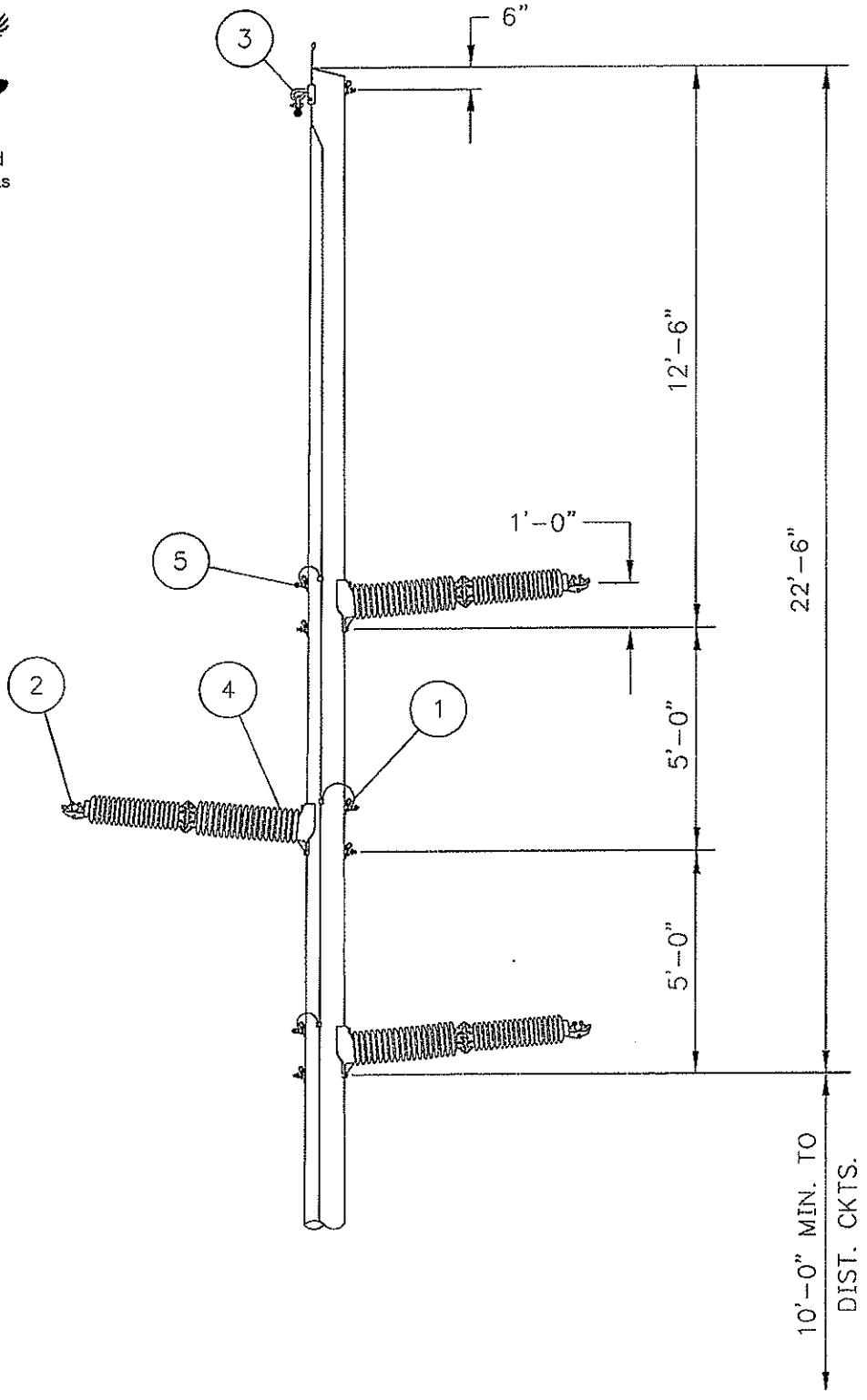
CIVIL

PROJ/EM: 19941581 | P.M.: | DATE: 12/01/2018 | ENG: S. HUNTING | CK: K. COOSON | DR: K. COOSON | DL: R. ROGERS | SCALE: N.T.S.

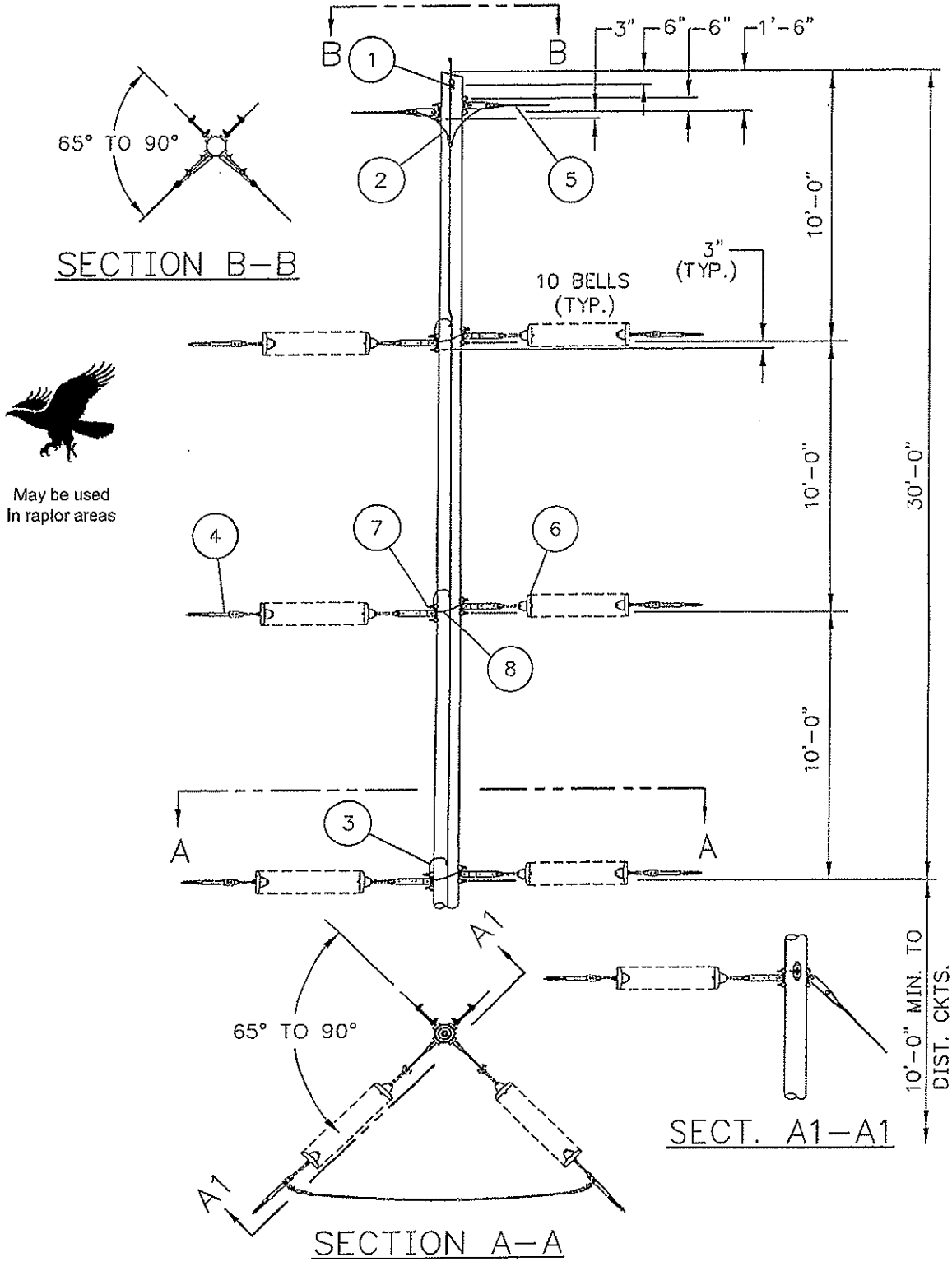
MATHINGTON SUBSTATION
CARBON COUNTY, UTAH
GRADING PLAN
EROSION CONTROL DETAILS

SHEET 5
147146.005
REVISION 0

May be used
In raptor areas

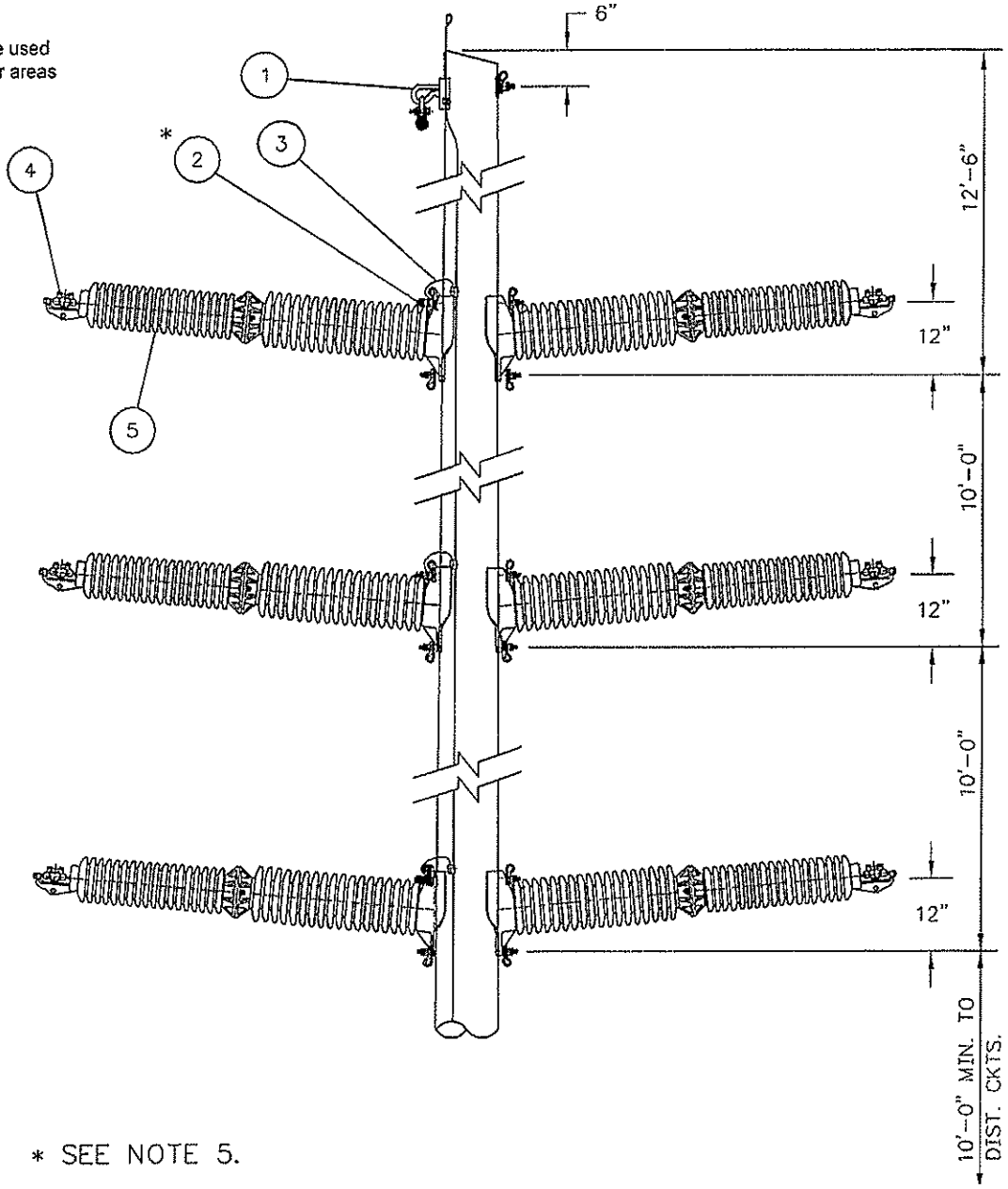


Transmission Construction Standard	138 kV Structure Shielded, Single-Circuit Tangent, Post Insulators	PACIFICORP A MIDAMERICAN ENERGY HOLDINGS COMPANY
Stds Team Leader (C. L. Wright): CLW Standards Services (M. Brimhall): MRB		14 Mar 97 / TG 201 Page 3 of 4



Transmission Construction Standard Stds Team Leader (C. L. Wright): Standards Services (M. Brimhall):	**138 kV Structure Shielded, Single-Circuit Dead-End, 65° to 90°**	PACIFICORP PACIFIC POWER UTAH POWER 14 Mar 97 | TG 252 Page 3 of 4

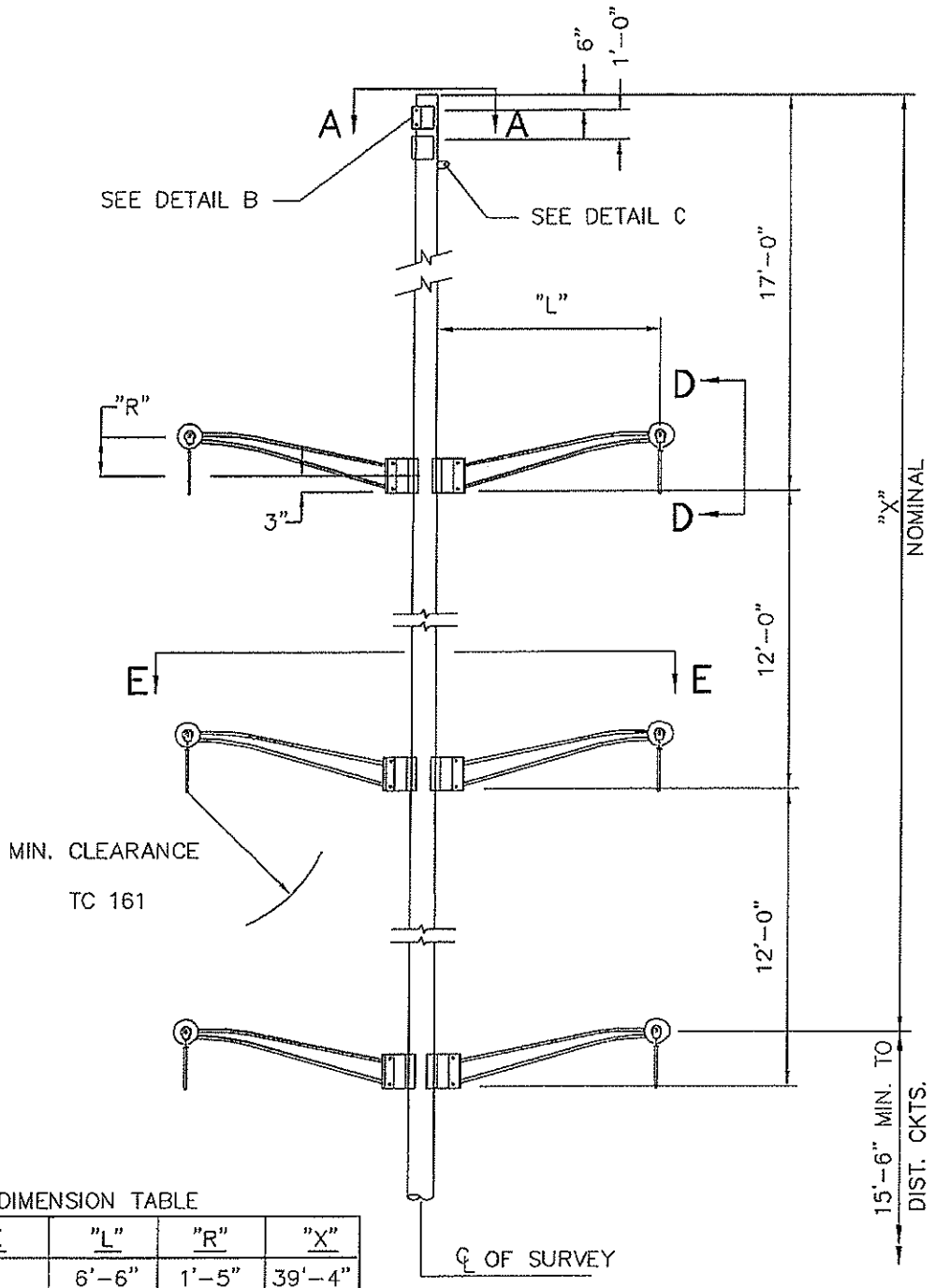
May be used
In raptor areas



* SEE NOTE 5.

Transmission Construction Standard	138 kV Structure—Shielded, Double-Circuit—Tangent, Post Insulators	PACIFICORP PACIFIC POWER UTAH POWER	
Stds Team Leader (C. L. Wright): CLW		24 Jun 98	TG 271 Page 3 of 4

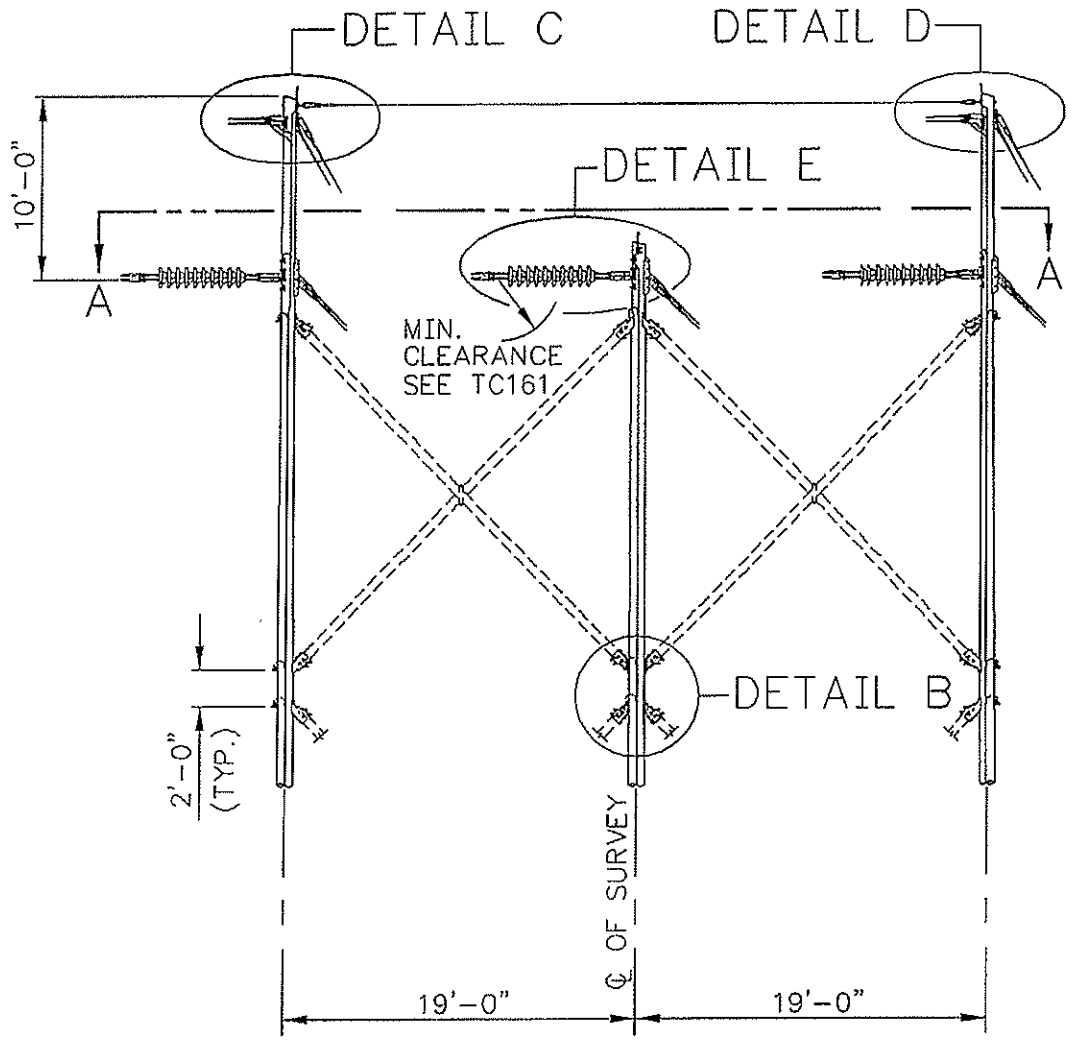
TG 285



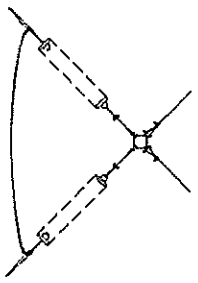
DIMENSION TABLE

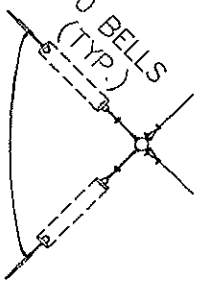
LINE ANGLE	"L"	"R"	"X"
0°–30°	6'–6"	1'–5"	39'–4"
30°–60°	7'–6"	1'–9"	39'–0"
60°–90°	9'–6"	2'–5"	38'–4"

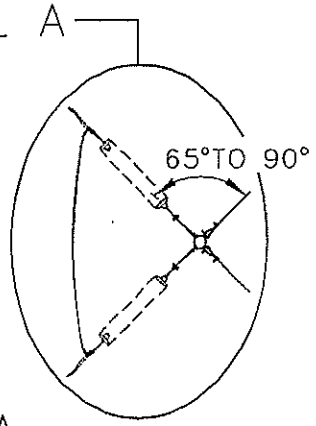
TG 452



May be used
In raptor areas



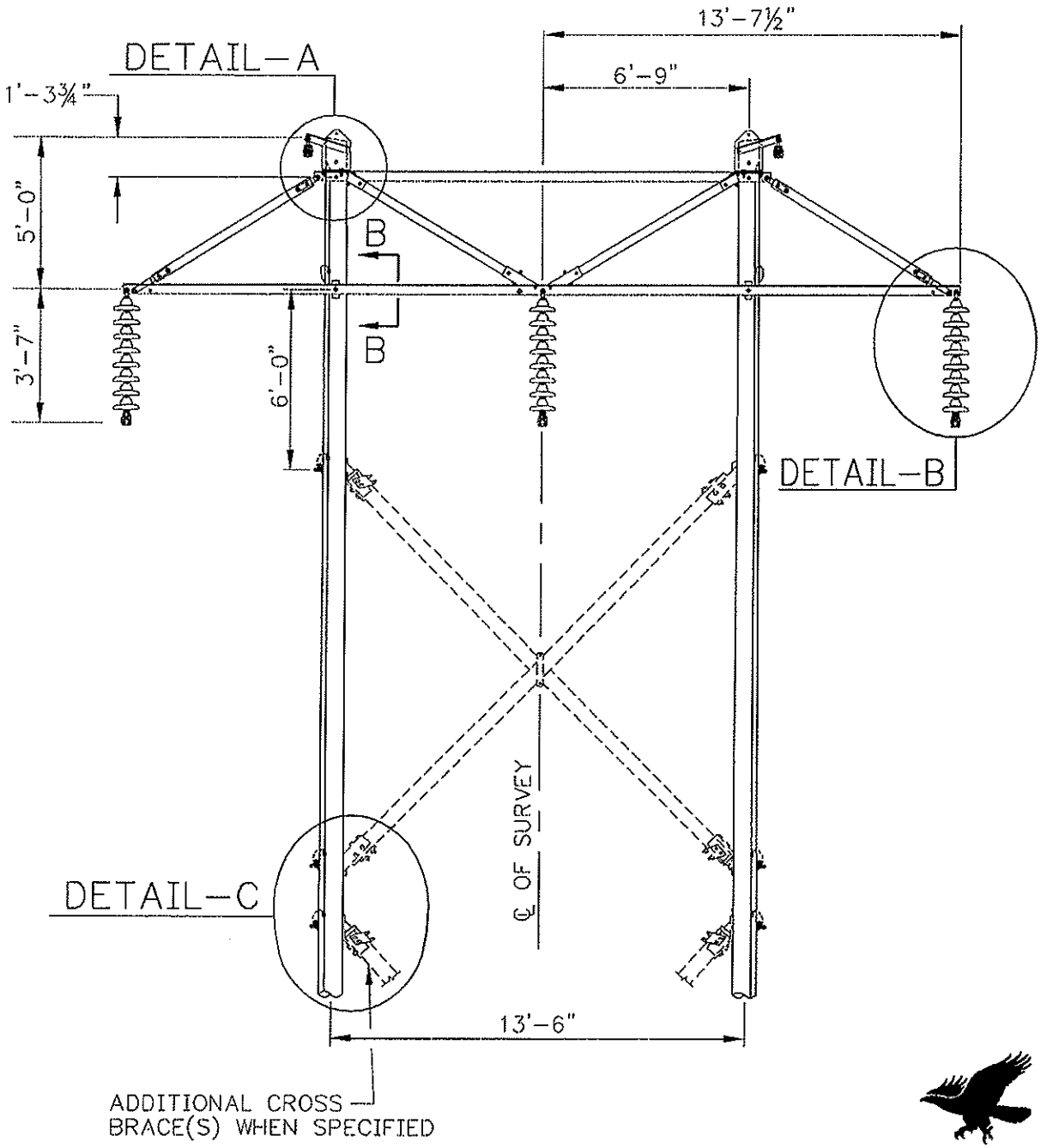




SECTION A–A

PACIFICORP PACIFIC POWER UTAH POWER	138 kV Structure Shielded, 3 Pole Dead-End, 65° to 90°	Transmission Construction Standard
TG 452 Page 2 of 4 — 8 Sep 97		Stds Team Leader (C. L. Wright): Standards Services (M. Brimhall):

TG 403



May be used
In raptor areas

PACIFICORP
PACIFIC POWER UTAH POWER

TG 403
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20 May 97

138 kV Structure
Shielded, H Frame
Tangent, with Steel Truss

Transmission
Construction Standard

Stds Team Leader (C. L. Wright): CLW
Standards Services (M. Brimhall):